
**STOPPING
WATER POLLUTION
AT ITS SOURCE**



MISA

Municipal/Industrial Strategy for Abatement

**ACUTE LETHALITY DATA
FOR ONTARIO'S ORGANIC
CHEMICAL MANUFACTURING SECTOR
EFFLUENTS COVERING THE PERIOD FROM
OCTOBER 1989 TO MARCH 1990**



**Environment
Ontario**

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ISBN 0-7729-8788-2

ACUTE LETHALITY DATA FOR ONTARIO'S
ORGANIC CHEMICAL MANUFACTURING SECTOR
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OCTOBER 1989 TO MARCH 1990

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SEPTEMBER 1991



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PIBS 1662
log 91-2345-068

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TD/195/C45/A38/MOE/MISA

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SUMMARY

Under the MISA program, the Organic Chemical Manufacturing Sector was required to monitor its discharges (both process and cooling waters) for acute lethality to trout and to *Daphnia magna* by conducting laboratory toxicity tests. This requirement was based on provisions of the Ontario Environmental Protection Act which allowed the Ministry to write regulations requesting persons responsible for sources of contaminants to monitor, record and report to the Ministry. Specific details on the toxicity testing requirements may be found in the General Effluent Monitoring Regulation (Ontario Regulation 695/88) and the Effluent Monitoring Regulation For The Organic Chemical Manufacturing Sector (Ontario Regulation 209/89). For the purposes of these regulations, organic chemical manufacturing refers to the manufacture of chemicals based on carbon and the plants, within this industry, can be grouped into three classes of products; organic chemicals, plastics, and synthetic fibres. An overview of this sector in Ontario is described in the publication "The Development Document For The Effluent Monitoring Regulation For The Organic Chemical Manufacturing Sector. Env. Ontario 1989". Information collected under the MISA effluent monitoring program will be used toward the development of compliance limits for effluent acute toxicity. The following data report presents the toxicity results of this monitoring along with the results of audit samples that were tested at the Ministry's laboratory in Rexdale. In addition, toxicity tests of some intake waters were also submitted by industry and these have been included in this report.

The data collected during the first six months of monitoring indicate the majority of organic chemical manufactures' effluents were not acutely lethal. Over 80 % of the samples tested for trout toxicity and 60 % of the samples tested for *Daphnia* toxicity were determined to have been non-lethal by standard testing methods. Most of the samples that were determined to have been acutely lethal to trout and/or *Daphnia* were collected from sites at the following six companies: Cornwall Chemicals Ltd. (Cornwall), Courtaulds Fibres Canada (Cornwall), Du Pont Canada Inc. (Kingston), Du Pont Canada Inc. (Maitland), GE Plastics Canada Ltd. and Uniroyal Chemical Ltd. (Elmira). All these companies reported that one or more of their discharges were acutely lethal the majority of the time when sampled. The Figures 1 to 9 present selected toxicity data (LC50s) for trout and *Daphnia*. The plots are for those discharges that had some toxicity to both animals. Note that low values of LC50 mean high acute toxicity.

In general, toxicity tests are used as a rapid technique to assess the potential impact of complex effluents on the aquatic environment. In acute lethality toxicity testing, aquatic organisms are exposed to undiluted effluent, and several effluent dilutions, for a fixed period of time. Trout tests use a 96 hour exposure regime while *Daphnia* tests run for 48 hours. In both tests, the number of organisms which have died would be the measured parameter. The LC50 or the estimated concentration of effluent that causes 50 % mortality is generally used as the quantitative measure of toxicity. Non-lethal effluents are considered less likely to produce adverse impacts in the environment after dilution.

The Organic Chemical Manufacturing Sector Regulation required dischargers to collect information on their operations, and monitoring data from their effluents, and to provide this information to the Ministry. The timing of toxicity sampling was arranged to coincide with chemical characterization, also required under this regulation. The frequency of sampling was monthly for both toxicity test procedures on process effluents with the exception that if tests over three consecutive months showed insignificant mortalities with trout then in subsequent months a single concentration test may be used. For cooling water effluent, the required frequency of sampling and testing was quarterly. All acute lethality testing was conducted according to Ministry protocols (Protocol To Determine The Acute Lethality Of Liquid Effluents To Fish. Env. Ontario July 1983 and *Daphnia magna* Acute Lethality Toxicity Test Protocol. Env. Ontario April 1988).

The Organic Chemical Manufacturing Sector effluent acute toxicity monitoring originated sample results submitted for 58 sampling locations at a total of 27 companies. For the first six months of monitoring, starting in October 1989 and ending March 1990, 572 trout and *Daphnia* toxicity test results were submitted by the companies, and 54 audit tests were conducted by the Aquatic Toxicity Unit of Environment Ontario. BASF Canada Inc. (Arnprior), Du Pont Canada Inc. (Whitby), Guardsman Products (Cornwall), Morbern Chemicals (Cornwall), and Rohm and Haas Canada Inc. (Scarborough) were all brought under monitoring through regulation amendments after the initial promulgation date. Therefore, there were limited samples to review for these companies. BASF Canada Inc. (Sarnia), Courtaulds Fibres Canada (Cornwall), Du Pont Canada Inc. (Corunna and Maitland) and Esso Chemical Canada Ltd. (Sarnia) voluntarily submitted test results for tests conducted on intake water samples.

Of the 308 samples that were tested for acute toxicity to trout, 248 (80.5 %) were not acutely lethal. The effluent samples collected from 10 (37 %) companies were consistently non-acutely lethal. All the samples collected from cooling water discharges or from intake supplies were non-acutely lethal to trout. Companies included in this category are : AKZO Chemicals Ltd. (Sarnia), BASF Canada Inc. (Sarnia), Celanese Canada Inc. (Millhaven), Du Pont (Whitby), Esso Chemical Canada (Sarnia), Ethyl Canada Inc. (Corunna), Morbern Inc. (Cornwall), Novacor Chemicals Ltd. (Mooretown), Rohm & Haas Canada Inc. (Morrisburg) and Stepan Canada Inc. (Longford Mills). An additional 27 samples, 8.8 % of total, resulted in LC50s > 100 %. Many of these tests had only one fish die during the tests and might be interpreted as being not acutely lethal. Nine companies had one or more test result with a LC50 > 100 %. This category included the following companies : Amoco Canada Petroleum Canada Ltd. (Sarnia), B.F. Goodrich Canada Inc. (Thorold), BTL Specialty Resins (Belleville), Canadian Oxy Chemicals Ltd. (Fort Erie), Chinook Chemicals Company (Sombra), Dow Chemical Inc. (Sarnia), Du Pont Canada Inc. (Corunna), Du Pont Canada Inc. (Maitland) and Uniroyal Chemical Ltd. (Elmira).

Thirty-three samples, 10.7 % of the total number of samples tested, were determined to

have been acutely-lethal to trout (96 hour LC50 < 100 %). All the lethal samples were collected from 5 companies (19 % of total companies). This category included the following companies: Cornwall Chemicals Limited (Cornwall), Courtaulds Fibres Canada (Cornwall), Du Pont Canada Inc. (Kingston), GE Plastics Canada Ltd. (Coburg) and Polysar Ltd. (Sarnia). Polysar Ltd. had only one lethal effluent sample during the first six months of monitoring, while the other plants' process effluents were lethal the majority of the time when sampled. The most lethal samples were sampled from Courtaulds Fibres Canada (Cornwall), where the 96 hour LC50s ranged from 1 % to 61 %.

Of the 328 samples tested for acute toxicity to *Daphnia magna*, 198 samples (60.4 %) were determined to have been non-acutely lethal. The effluents from AKZO Chemicals Ltd., B.F. Goodrich Canada Inc., BASF Canada Inc., Canadian Oxy Chemicals Ltd., and Novacor Chemicals Ltd. were not acutely lethal to *Daphnia*. An additional 69 samples (21.2 %) had 48 h LC50s > 100 %. Many of these samples had only one neonate die during the test, and might be interpreted as being not acutely lethal. Fourteen samples elicited an unusual toxicity response, in which the effluent became more toxic when it was diluted.

Fifty-one of the 328 samples (15.5 %) were acutely toxic to *Daphnia*, generating 48 h LC50s < 100 %. All the lethal samples were from ten companies, and 36 of 51 toxic samples were from four companies (Courtaulds Fibres Canada, Cornwall Chemicals Ltd., and Du Pont Canada Inc. plants in Kingston and Maitland). The effluents from Courtaulds Fibres Canada process outfalls #100 and #300 were consistently among the most toxic in this sector. The LC50 values for these outfalls range from 0.9 % to 7.6 % effluent. The cause of toxicity is partially due to the extremes in pH found at these outfalls. Process effluent #100 consistently has a pH < 2, and process effluent # 300 consistently has a pH > 12.

For several of the toxic samples, a quick review of the matching analytical chemistry monitoring data has revealed some probable causes of the observed acute toxicity. Where this was possible, a brief explanation to the probable causes of toxicity has been described below. However for some effluent samples, which were consistently lethal, such as the effluents from Uniroyal, and Dupont Kingston, the causes of toxicity were not as conclusive, and will need the complete year of monitoring data before an assessment can be made. It is clear that Courtaulds Fibres effluent toxicity is associated with the effluents extreme pH conditions, and a mixture of several other toxic contaminants. One effluent was consistently measured to have a pH reading of 1.4, and another discharge was measured at 11.8. Water exhibiting a pH in the range between 6.5 and 8.5 is normally considered of good quality for fish health. In addition to the extreme pH conditions of Courtaulds effluent samples, which alone could have accounted for the observed mortalities, the bioassay fish were challenged also by high concentrations of sulphide, zinc, lead, nickel and mercury. These contaminants were consistently measured in Courtaulds' effluent at lethal or sublethal concentrations. Cornwall Chemical's process

effluent samples were consistently lethal to both trout and *Daphnia*. On the days where the effluent was lethal, high concentrations of sulphide and carbon tetrachloride were measured. Sulphide and carbon tetrachloride concentrations reached as high as 15 ppm and 20 ppm respectively. It is probable the hydrogen sulphide and carbon tetrachloride content in the effluent contributed to the observed lethality. Of all the intake water samples tested, only one source proved lethal. The Dupont Maitland intake samples for the months of November, January and February were determined to have been lethal to *Daphnia* and/or trout. The lethality is believed to have been caused by the high residual chlorine content. This is consistent with Dupont's practice of chlorinating their intake water prior to use. Dupont Maitland discharge water was also determined to have been lethal for the October and November samples. The effluent toxicity was due in part to the elevated levels of copper, zinc and ammonia. The combined process effluent samples from GE Plastics, Coburg were found to have been consistently lethal to test fish and not lethal to the *Daphnia magna*. High concentrations of cyanide and ammonia were measured in the effluent when lethality occurred, and could be considered as contributing factors to toxicity. *Daphnia*, like invertebrates in general, are less sensitive to ammonia and cyanide. This would account for the different observed effects between the two test species.

In general, the reporting of toxicity data by the industries went smoothly. The quality of the toxicity results and presentation has been good. Where the Ministry requested industry for data resubmission to correct data entry errors and/or for additional information, the companies complied favourably. Where Ministry audit samples were collected and tested, the results were consistent with results submitted by industry. The following portion of this report presents the acute lethality data as submitted by industry, grouped by company. A summary of each company's results precedes each grouping of individual results. The comment fields on individual Toxicity Test Reports were entered by the industry's laboratory performing the tests, and should not be expected to be consistent across samples and do not represent the views of the Ministry.

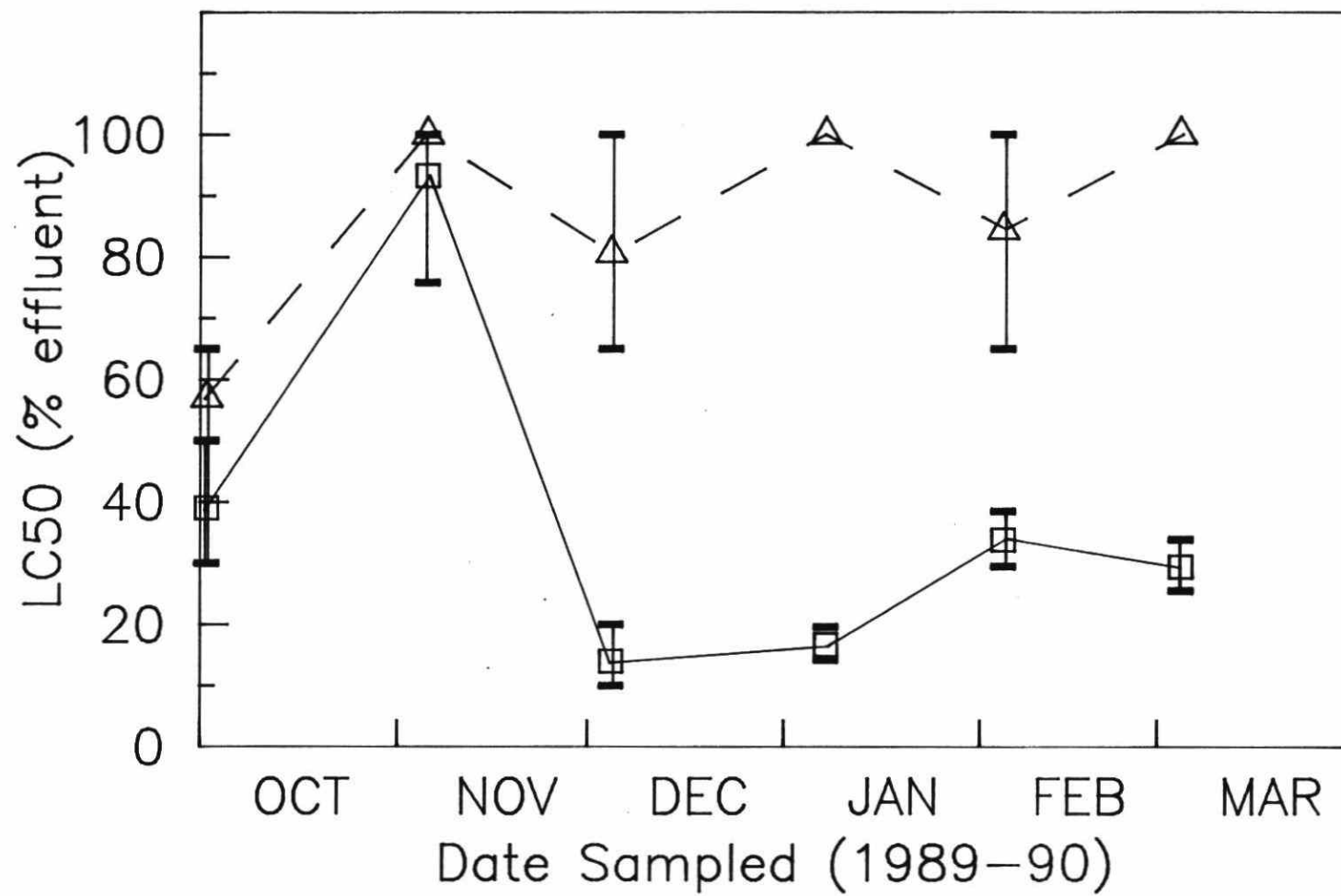


Figure 1. Acute Toxicity of Effluent Samples from outfall #100 at Cornwall Chemicals, Cornwall. (Δ Trout $\square$ *Daphnia magna*)

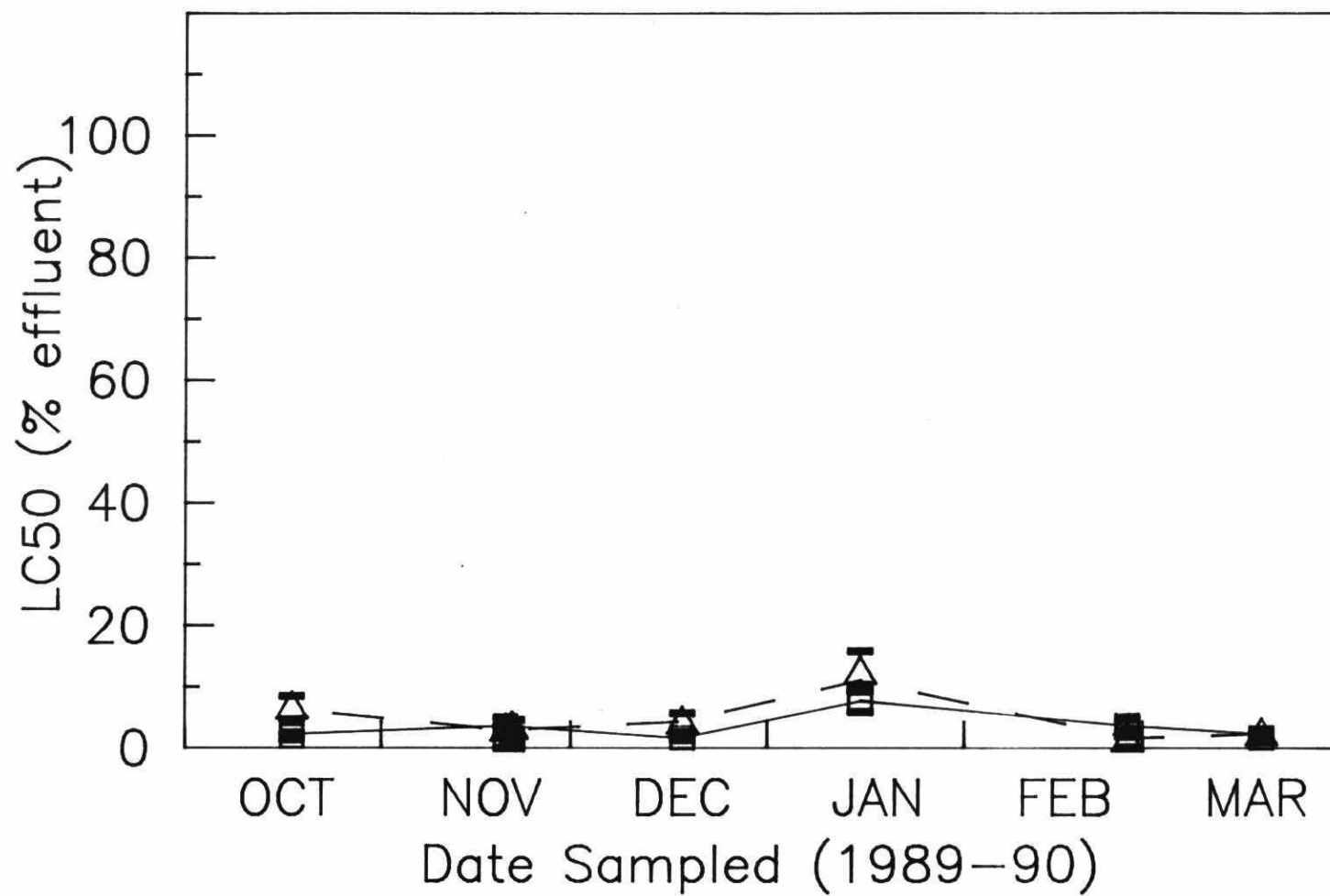


Figure 2. Acute Toxicity of Effluent Samples from outfall #100 at Courtaulds Fibres Canada, Cornwall. (Δ Trout $\square$ *Daphnia magna*) Solid symbols are MISA audits.

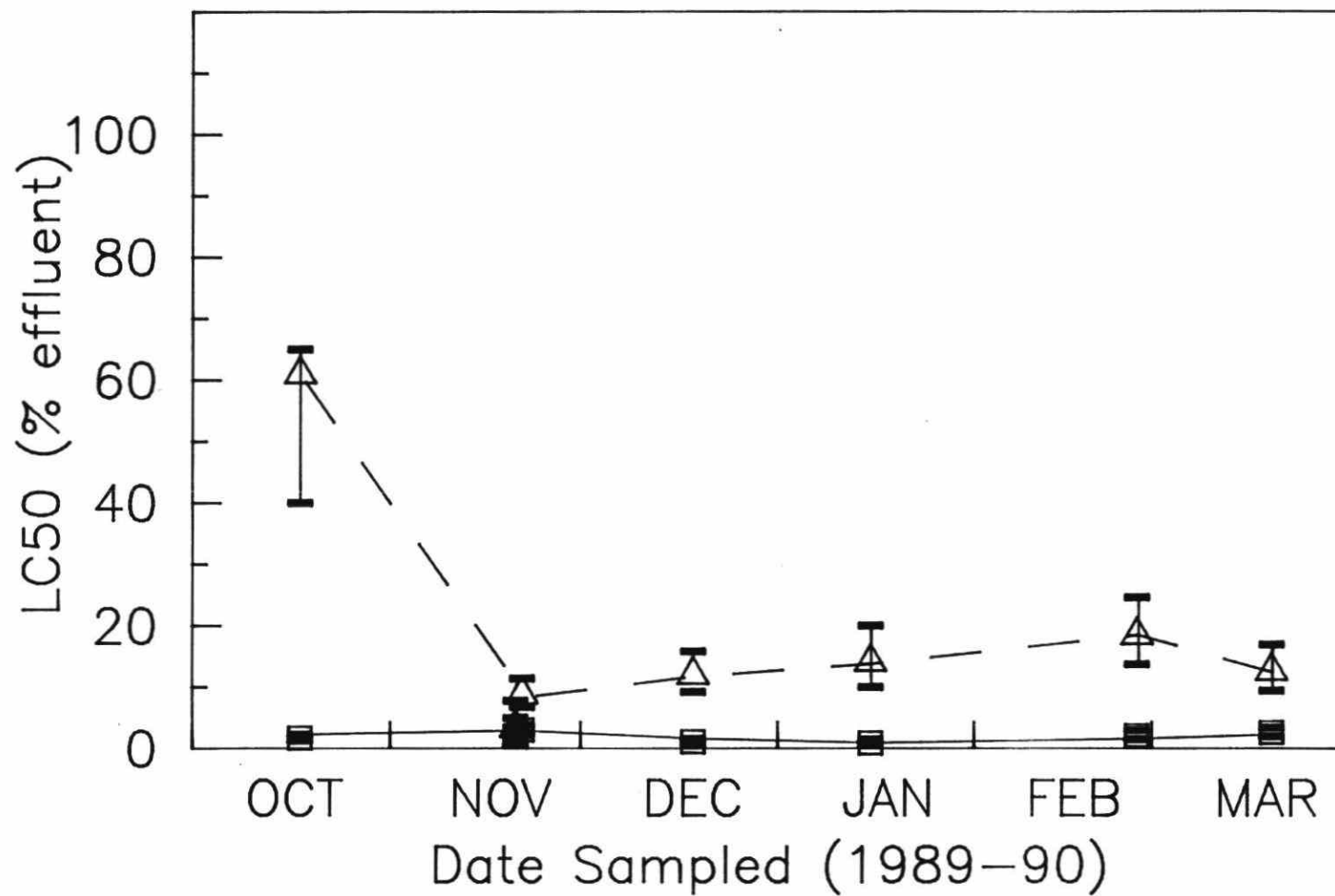


Figure 3. Acute Toxicity of Effluent Samples from outfall #300 at Courtaulds Fibres Canada, Cornwall. (Δ Trout $\square$ *Daphnia magna*) Solid symbols are MISA audits.

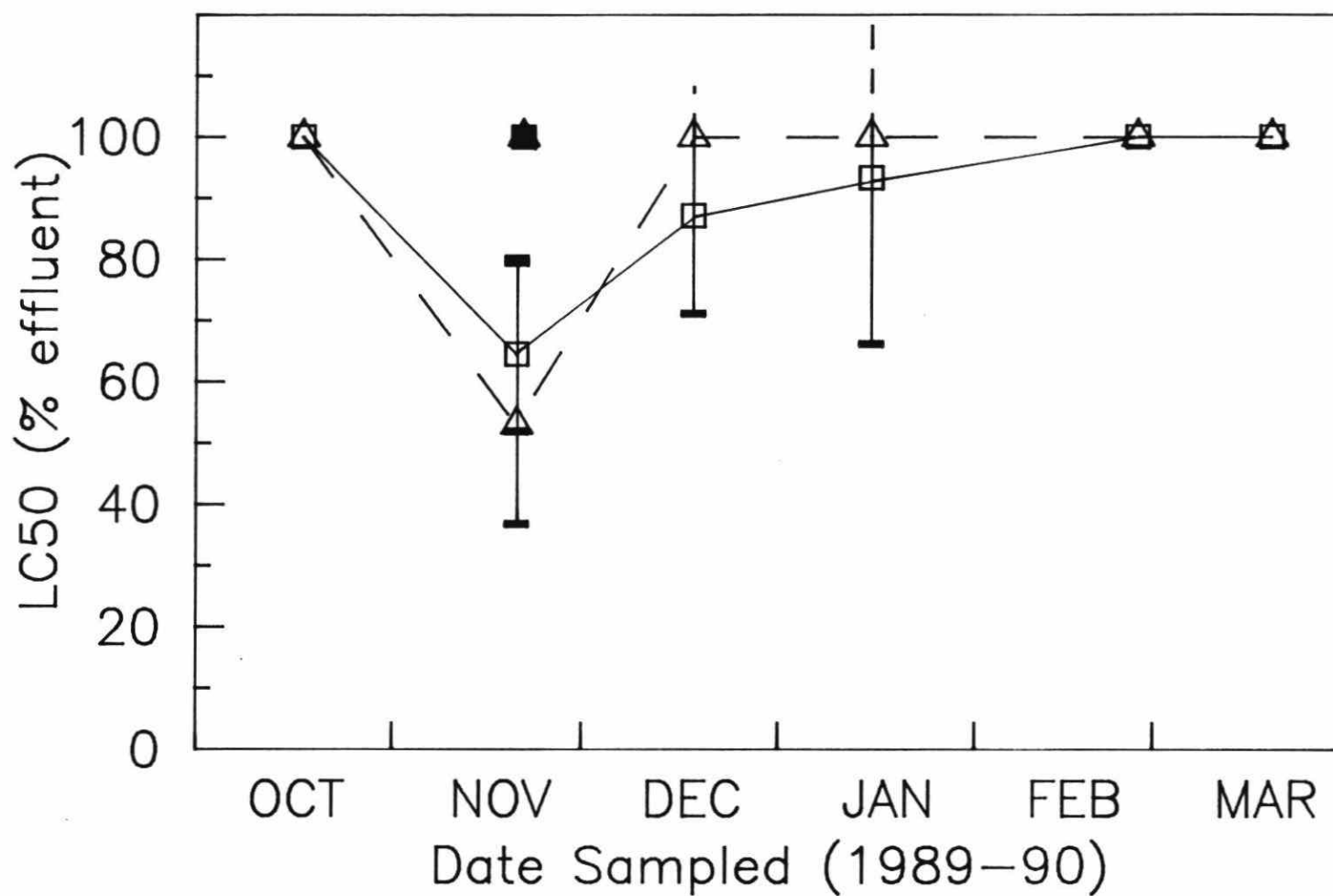


Figure 4. Acute Toxicity of Effluent Samples from outfall #700 at Courtaulds Fibres Canada, Cornwall. (Δ Trout $\square$ *Daphnia magna*) Solid symbols are MISA audits.

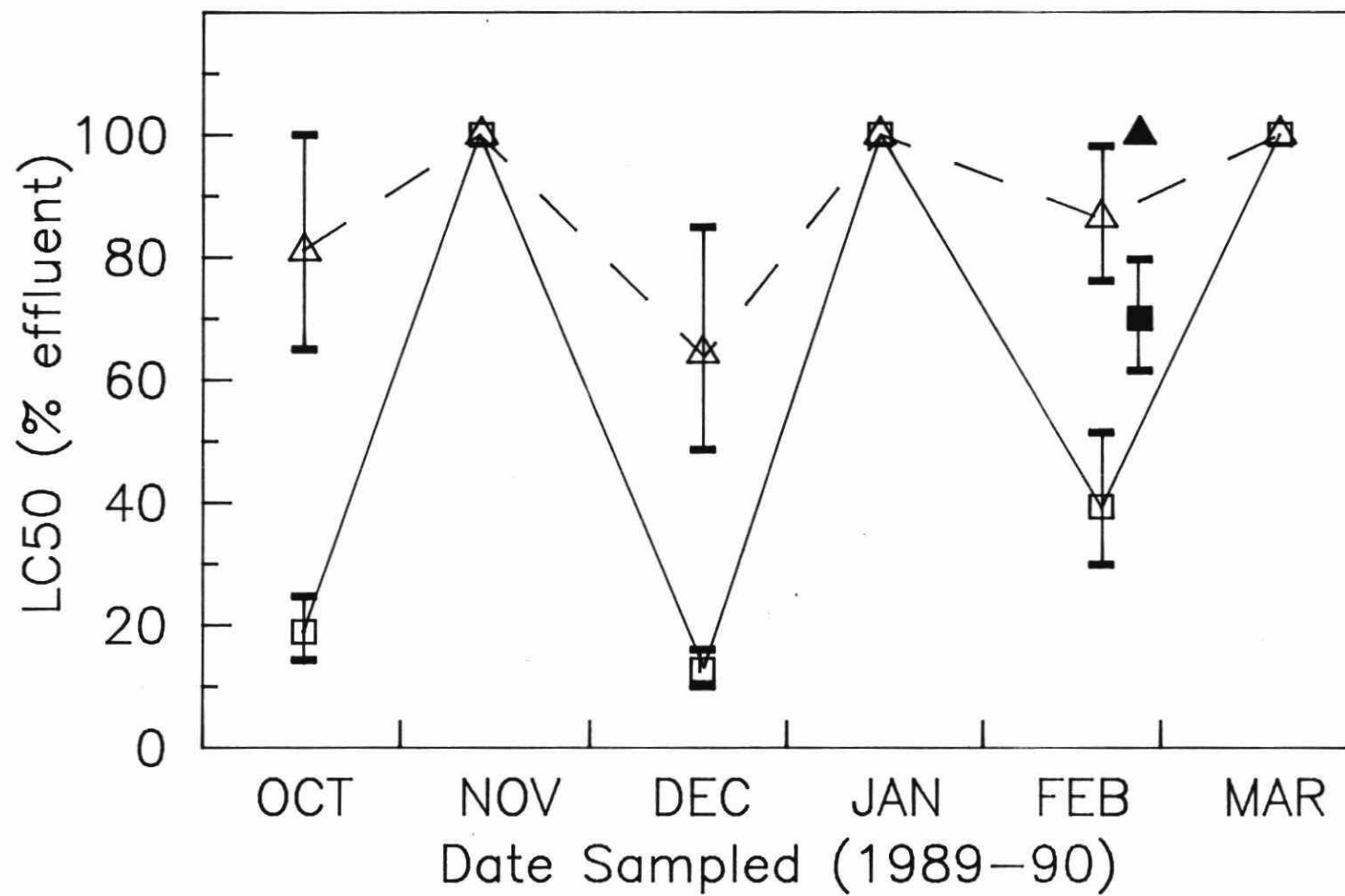


Figure 5. Acute Toxicity of Effluent Samples from outfall #700 at DuPont Canada Inc., Kingston. (Δ Trout □ Daphnia magna) Solid symbols are MISA audits.

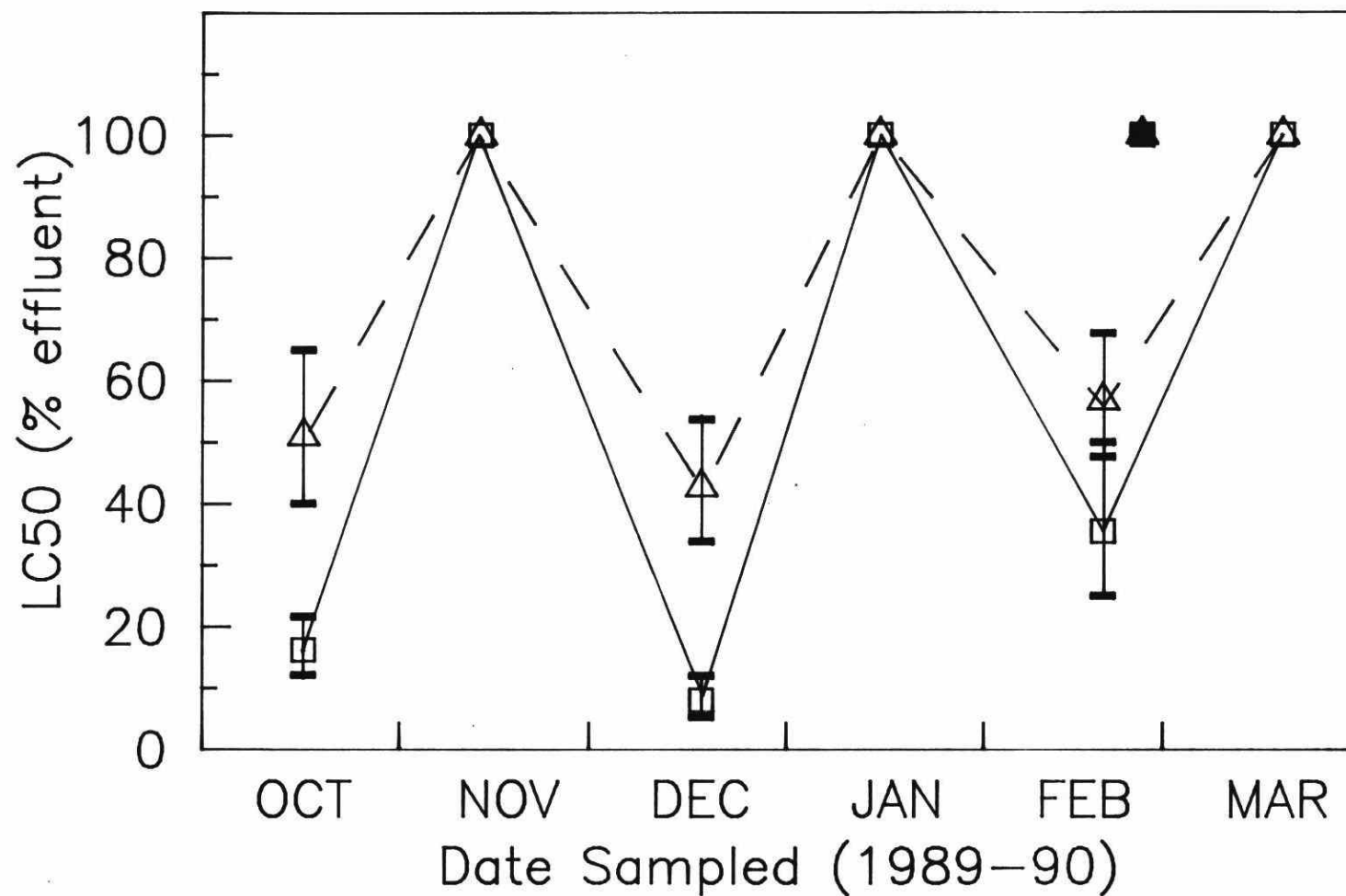


Figure 6. Acute Toxicity of Effluent Samples from outfall #1100 at DuPont Canada Inc., Kingston. (Δ Trout $\square$ *Daphnia magna*) Solid symbols are MISA audits.

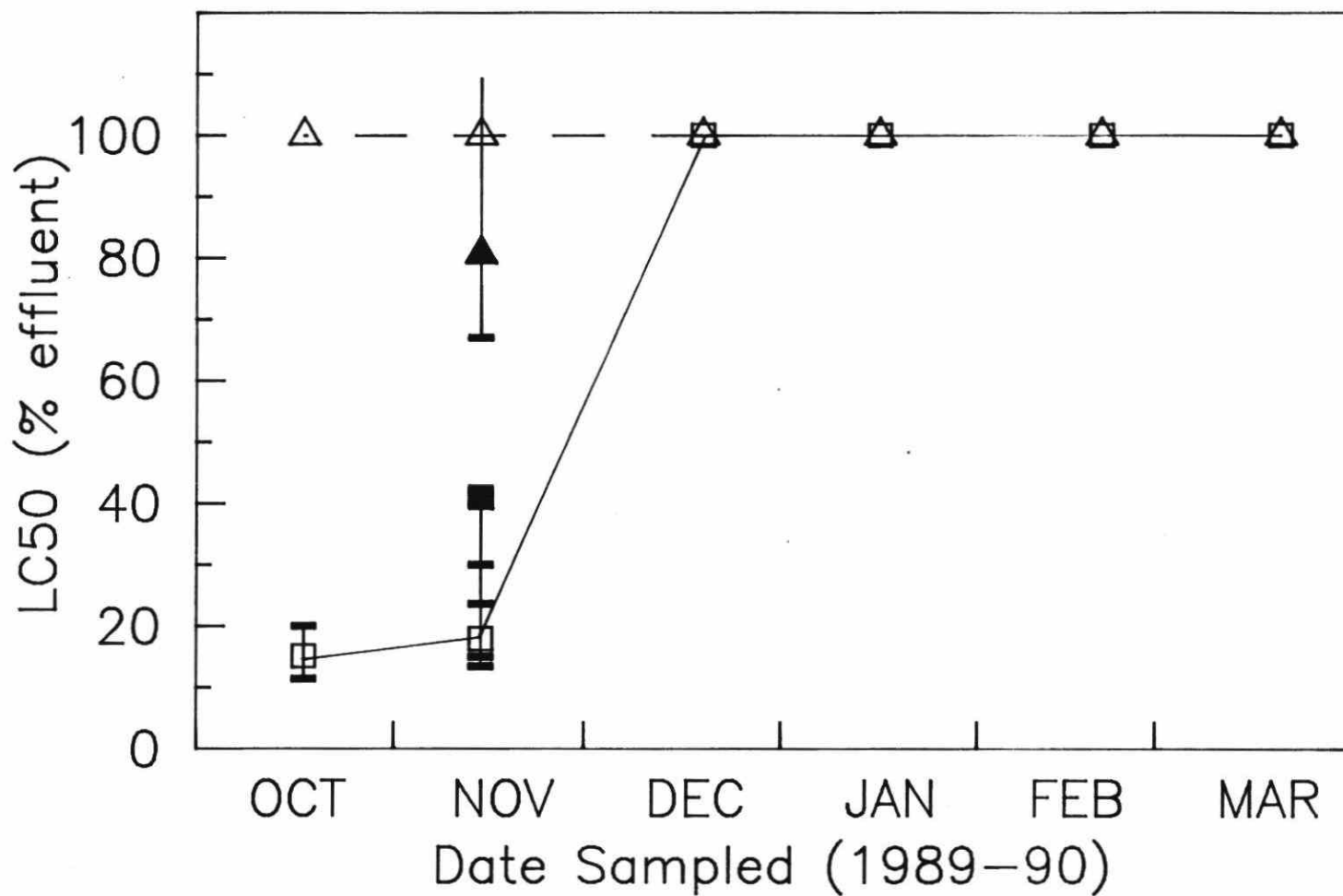


Figure 7. Acute Toxicity of Effluent Samples from outfall #1100 at DuPont Canada Inc., Maitland. (Δ Trout $\square$ *Daphnia magna*) Solid symbols are MISA audits.

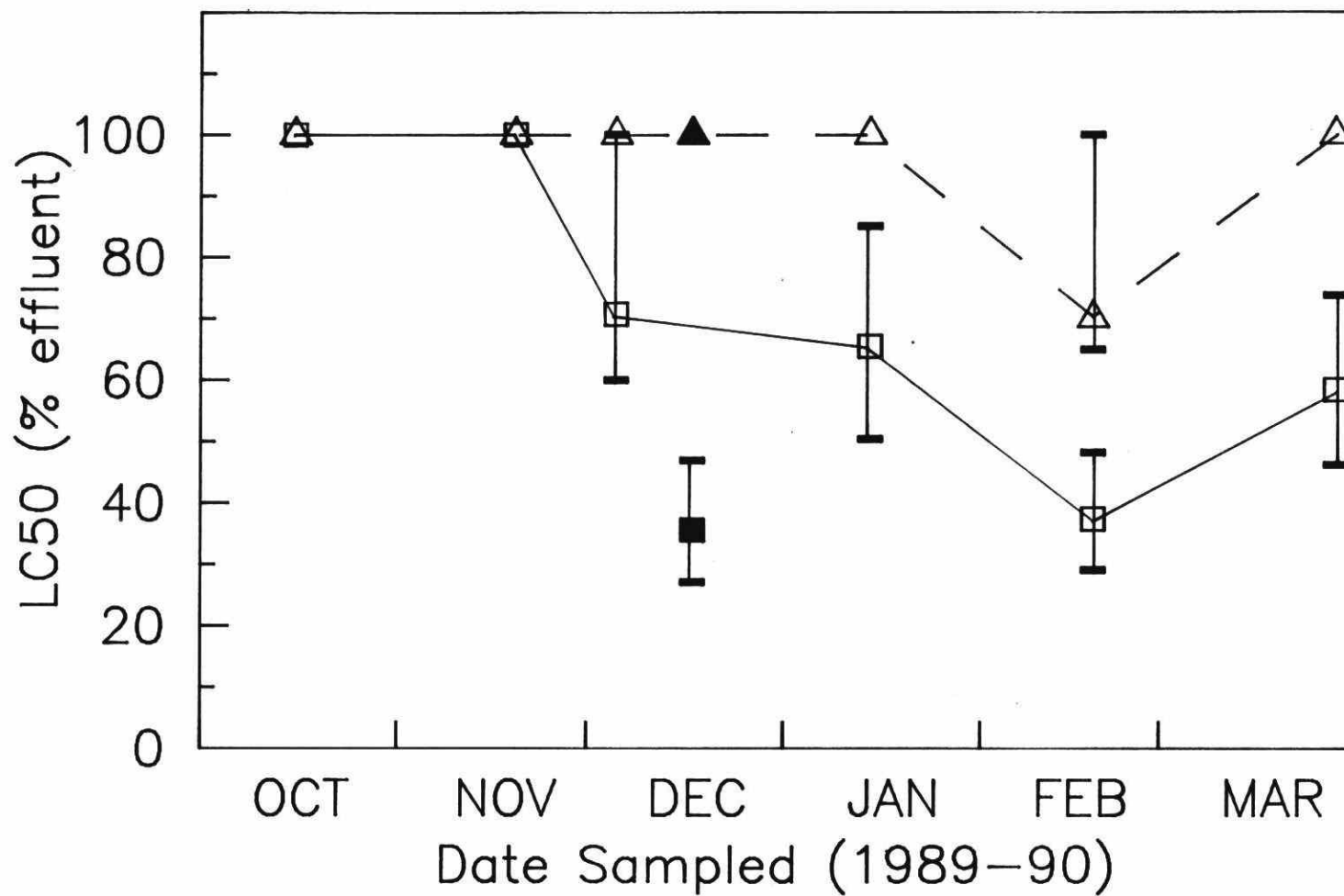


Figure 8. Acute Toxicity of Effluent Samples from outfall #600 at Uniroyal Chemicals Ltd., Elmira. (Δ Trout $\square$ *Daphnia magna*) Solid symbols are MISA audits.

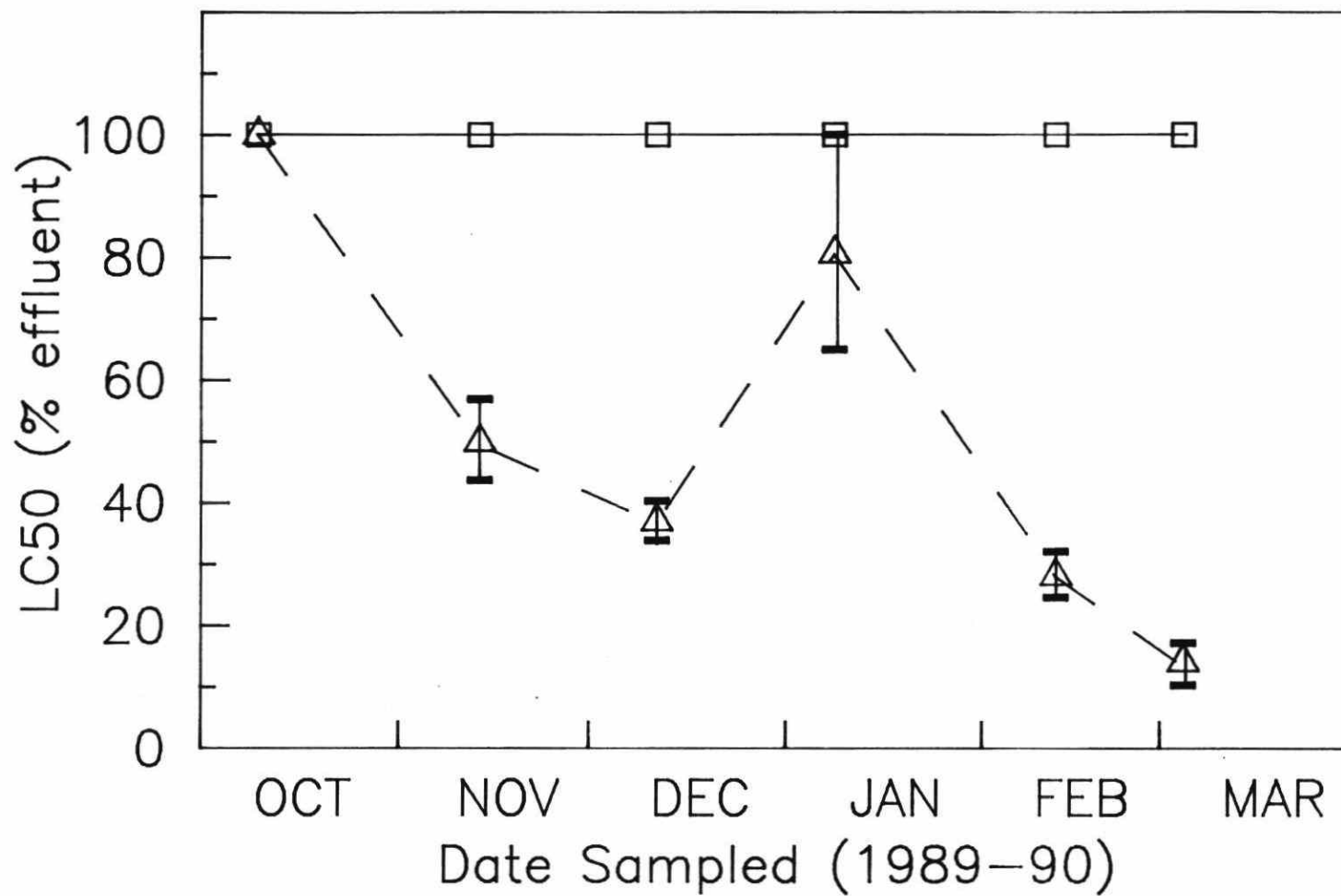


Figure 9. Acute Toxicity of Effluent Samples from outfall #100 at G.E. Plastics Canada Ltd., Cobourg. (Δ Trout $\square$ *Daphnia magna*)

COMPANY: AKZO Chemicals Ltd., Sarnia
(28690006)
SECTOR: Organic Chemical
REGION: Southwest

SUMMARY

The data for three trout bioassays, conducted on cooling water samples collected between October 1989 and March 1990, were provided by AKZO Chemicals Ltd. All three cooling water samples were determined to have been non-acutely lethal to test fish. An additional audit sample collected in December from the cooling water effluent was tested by the O.M.E. laboratory and was determined to have been non-acutely lethal.

OT cooling water

03890235 sampled: 10/28/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05890121 sampled: 11/22/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

01890285 sampled: 12/07/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA audit sample.

05900028 sampled: 02/07/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

OT cooling water

storm water

storm water

rain gauge

intake water

TOXICITY TEST REPORT

Sample: 03890235

TEST CONDITIONS

Company : AKZO Chemicals Ltd.
 Sarnia, ONT
 (28690006)
 Region : Southwest
 Industry : Organic Chemical
 Control point : OT cooling water, (100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : T. Pickering
 Date Collected : 10/28/89
 Received : 10/30/89
 Tested : 10/31/89 at: 1330

Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E						TOTAL MORTALITY %
	%	00:00	04:00	24:00	48:00	72:00	96:00
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890235

TEST CONC. %	E L A P S E D T I M E					
	00:00	04:00	24:00	48:00	72:00	96:00

Control	pH	7.9					8.4
	O2 ppm	8.5					9.3
	Cond.	560					552
	Temp(C)	16.0	15.5	14.0	15.0	15.0	15.0
10	pH	7.8					8.5
	O2 ppm	8.2					9.5
	Cond.	528					519
	Temp(C)	16.0	15.5	14.0	15.0	15.0	15.0
20	pH	7.8					8.3
	O2 ppm	8.2					9.4
	Cond.	495					496
	Temp(C)	16.0	15.5	14.0	15.0	15.0	15.0
40	pH	7.8					8.2
	O2 ppm	8.4					9.3
	Cond.	432					437
	Temp(C)	16.0	15.5	14.0	15.0	15.0	15.0
65	pH	7.9					8.2
	O2 ppm	8.8					9.5
	Cond.	352					358
	Temp(C)	16.0	15.5	14.0	15.0	15.0	15.0
100	pH	8.1					7.8
	O2 ppm	9.2					9.2
	Cond.	231					242
	Temp(C)	16.0	15.5	14.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 05890121

TEST CONDITIONS

Company : AKZO Chemicals Ltd.
Sarnia, ONT
(28690006)
Region : Southwest
Industry : Organic Chemical
Control point : OT cooling water, (100)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C. Ferguson
Date Collected : 11/22/89
Received : 11/22/89
Tested : 11/22/89 at: 1545
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
%	00:00	21:55	48:25	72:55	96:55	%
100	0	0	0	0	0	0
75	0	0	0	0	0	0
56	0	0	0	0	0	0
25	0	0	0	0	0	0
10	0	0	0	0	0	0
1	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890121

TEST CONC. %	E L A P S E D T I M E				
	00:00	21:55	48:25	72:55	96:55

100	pH	8.0	7.8	7.8	7.8	7.6
	O2 ppm	10.5	9.7	9.0	9.9	9.8
	Cond.	265				175
	Temp(C)	15.0	15.0	15.0	15.0	15.0
75	pH	7.6	7.9	7.8	7.8	7.7
	O2 ppm	10.3	9.9	9.2	10.0	9.9
	Cond.	169				172
	Temp(C)	15.0	15.0	15.0	15.0	15.0
56	pH	7.4	7.8	7.8	7.7	7.6
	O2 ppm	10.1	9.7	9.1	9.9	9.6
	Cond.	167				172
	Temp(C)	15.0	15.0	15.0	15.0	15.0
25	pH	7.3	7.8	7.8	7.7	7.6
	O2 ppm	9.8	9.8	9.2	10.0	9.8
	Cond.	166				172
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.3	7.8	7.8	7.7	7.6
	O2 ppm	9.8	9.6	8.8	9.9	9.9
	Cond.	167				171
	Temp(C)	15.0	15.0	15.0	15.0	15.0
1	pH	7.3	7.7	7.7	7.7	7.6
	O2 ppm	9.8	9.8	9.1	9.8	9.6
	Cond.	170				175
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.1	7.8	7.7	7.7	7.5
	O2 ppm	10.0	10.0	9.2	10.0	9.8
	Cond.	165				168
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.2	7.7	7.7	7.7	7.5
	O2 ppm	10.2	9.8	9.1	10.1	10.0
	Cond.	170				166
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 01890285

TEST CONDITIONS

Company : AKZO Chemicals Ltd.
Sarnia, ONT
(28690006)
Region : Southwest
Industry : Organic Chemical
Control point : OT cooling water, (100)
Laboratory : MOE
Sampling Method : grab
Sampled By : J. Longlade
Date Collected : 12/07/89
Received : 12/08/89
Tested : 12/11/89 at: 1000
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME										TOTAL MORTALITY
%	00:00	00:30	01:00	02:00	04:00	26:00	47:30	71:00	96:00	%	
100	0	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA audit sample.

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01890285

TEST CONC. %	ELAPSED TIME									
	00:00	00:30	01:00	02:00	04:00	26:00	47:30	71:00	96:00	
100	pH 7.0			7.5	7.8	7.7	7.7	7.		
	O2 ppm 10.1			10.3	11.4	11.1	10.4	10.		
	Cond. 170			160	160	165	170	17		
	Temp(C) 14.0			14.0	14.0	14.0	14.0	14.		
65	pH 7.7			7.7	7.8	7.8	7.8	7.		
	O2 ppm 10.4			10.4	11.4	11.4	10.4	10.		
	Cond. 190			190	195	190	200	20		
	Temp(C) 14.0			14.0	14.0	14.0	14.0	14.		
40	pH 7.7			7.7	7.8	7.8	7.8	7.		
	O2 ppm 10.4			10.4	11.4	11.1	10.4	9.		
	Cond. 215			215	210	210	220	22		
	Temp(C) 14.0			14.0	14.0	14.0	14.0	14.		
30	pH 7.6			7.6	7.7	7.7	7.7	7.		
	O2 ppm 10.2			10.2	11.1	10.9	10.3	10.		
	Cond. 220			220	215	230	230	23		
	Temp(C) 14.0			14.0	14.0	14.0	14.0	14.		
20	pH 7.7			7.7	7.9	7.6	7.8	7.		
	O2 ppm 10.5			10.5	11.4	11.1	10.4	10.		
	Cond. 230			230	225	245	260	26		
	Temp(C) 14.0			14.0	14.0	14.0	14.0	14.		
10	pH 7.7			7.7	7.9	7.7	7.8	7.		
	O2 ppm 10.4			10.4	11.4	11.1	10.3	9.		
	Cond. 255			255	250	250	260	27		
	Temp(C) 14.0			14.0	14.0	14.0	14.0	14.		
Control	pH 7.3			7.3	7.9	7.2	7.6	7.		
	O2 ppm 10.2			10.2	11.3	10.7	10.3	9.		
	Cond. 265			265	265	265	260	28		
	Temp(C) 14.0			14.0	14.0	14.0	14.0	14.		

TOXICITY TEST REPORT

Sample: 05900028

TEST CONDITIONS

Company : AKZO Chemicals Ltd.
 : Sarnia, ONT
 : (28690006)
 Region : Southwest
 Industry : Organic Chemical
 Control point : OT cooling water, (100)
 Laboratory : Pollutech
 Sampling Method : Grab
 Sampled By : C.Ferguson
 Date Collected : 02/07/90
 Received : 02/07/90
 Tested : 02/08/90 at: 1500
 Type of Bioassay : STATIC
 : (Protocol to determine the acute lethality
 : of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E						TOTAL MORTALITY
	%	03:00	00:00	23:00	45:00	67:30	97:00
100	0	0	0	0	0	0	0
75		0	0	0	0	0	0
56		0	0	0	0	0	0
25		0	0	0	0	0	0
10		0	0	0	0	0	0
1		0	0	0	0	0	0
Control		0	0	0	0	0	0
Control		0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900028

TEST CONC. %	E L A P S E D T I M E					
	03:00	00:00	23:00	45:00	67:30	97:00

100	pH	7.9	7.7			7.7
	O2 ppm	8.8	9.4			9.3
	Cond.	200	167			165
	Temp(C)	20.0	15.0			15.0
75	pH		7.6			7.7
	O2 ppm		9.6			9.5
	Cond.		167			165
	Temp(C)		15.0			15.0
56	pH		7.4			7.7
	O2 ppm		10.0			9.2
	Cond.		165			169
	Temp(C)		15.0			15.0
25	pH		7.2			7.6
	O2 ppm		10.1			9.3
	Cond.		162			168
	Temp(C)		15.0			15.0
10	pH		7.2			7.6
	O2 ppm		10.2			9.4
	Cond.		162			170
	Temp(C)		15.0			15.0
1	pH		7.2			7.6
	O2 ppm		10.2			9.5
	Cond.		162			170
	Temp(C)		15.0			15.0
Control	pH		7.2			7.6
	O2 ppm		10.2			9.6
	Cond.		166			168
	Temp(C)		15.0			15.0
Control	pH		7.2			7.6
	O2 ppm		10.2			9.6
	Cond.		166			170
	Temp(C)		15.0			15.0

COMPANY: AKZO Chemicals Ltd., Sarnia
(28690006)
SECTOR: Organic Chemical
REGION: Southwest

SUMMARY

Data for three *Daphnia magna* acute lethality toxicity tests conducted on samples of once through cooling water collected between October 1989 and March 1990 were submitted by AKZO Chemicals Ltd. of Sarnia. Two samples were not acutely lethal to *Daphnia*, and one sample had one animal die in the 100% concentration during the test. One sample of this effluent was tested in the Ministry laboratory in December. It was not acutely lethal to *Daphnia*.

OT cooling water

03890235 sampled: 10/28/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05890121 sampled: 11/22/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02890285 sampled: 12/07/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

05900028 sampled: 02/07/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

OT cooling water

storm water

storm water

rain gauge

intake water

TOXICITY TEST REPORT

Sample: 03890235

TEST CONDITIONS

Company : AKZO Chemicals Ltd.
Sarnia, ONT
(28690006)
Region : Southwest
Industry : Organic Chemical
Control point : OT cooling water, (100)
Laboratory : BAR
Sampling Method : Grab
Sampled By : T. Pickering
Date Collected : 10/28/89
Received : 10/30/89
Tested : 10/31/89 at: 1315
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	%
Control	0	0	0	0	0
6	0	0	0	0	0
13	0	0	0	0	0
25	0	0	0	0	0
50	0	0	0	0	0
100	0	1	1	1	8

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :TOXICITY TEST PARAMETERS

Sample Number: 03890235

TEST CONC. %	ELAPSED TIME			
	00:00	04:00	24:00	48:00

Control	pH	7.9			8.1
	O2 ppm	9.4			8.4
	Cond.	300			297
	Temp(C)	20.0	20.0	19.0	19.5
6	pH	7.9			8.1
	O2 ppm	9.2			8.7
	Cond.	299			293
	Temp(C)	20.0	20.0	19.0	19.5
13	pH	7.9			8.0
	O2 ppm	8.8			8.8
	Cond.	297			289
	Temp(C)	20.0	20.0	19.0	19.5
25	pH	7.9			8.1
	O2 ppm	8.7			8.9
	Cond.	287			281
	Temp(C)	20.0	20.0	19.0	19.5
50	pH	8.0			8.1
	O2 ppm	8.7			8.9
	Cond.	270			264
	Temp(C)	20.0	20.0	19.0	19.5
100	pH	8.1			7.9
	O2 ppm	8.8			8.9
	Cond.	233			229
	Temp(C)	20.0	20.0	19.0	19.5

TOXICITY TEST REPORT

Sample: 05890121

TEST CONDITIONS

Company : AKZO Chemicals Ltd.
 : Sarnia, ONT
 : (28690006)
 Region : Southwest
 Industry : Organic Chemical
 Control point : OT cooling water, (100)
 Laboratory : Pollutech
 Sampling Method : Grab
 Sampled By : C.Ferguson
 Date Collected : 11/22/89
 Received : 11/22/89
 Tested : 11/22/89 at: 1535
 Type of Bioassay : STATIC
 : (Daphnia magna Acute Lethality Toxicity
 : Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00 48:35		%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal
 95% fid. limits : 0.0 - 0.0 %
 Comments :

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890121

TEST CONC.	ELAPSED TIME	
%	00:00 48:35	

100	pH	7.9	7.9
	O2 ppm	9.0	9.0
	Cond.	200	198
	Temp(C)	20.0	20.0
50	pH	8.0	8.0
	O2 ppm	8.6	8.2
	Cond.	360	352
	Temp(C)	20.0	20.0
26	pH	8.1	8.1
	O2 ppm	8.6	8.2
	Cond.	430	430
	Temp(C)	20.0	20.0
13	pH	8.1	8.1
	O2 ppm	8.5	8.6
	Cond.	462	462
	Temp(C)	20.0	20.0
6	pH	8.1	8.1
	O2 ppm	8.6	8.8
	Cond.	470	485
	Temp(C)	20.0	20.0
Control	pH	8.1	8.1
	O2 ppm	8.9	9.0
	Cond.	498	500
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 02890285

TEST CONDITIONS

Company : AKZO Chemicals Ltd.
 Sarnia, ONT
 (28690006)
 Region : Southwest
 Industry : Organic Chemical
 Control point : OT cooling water, (100)
 Laboratory : MOE
 Sampling Method : grab
 Sampled By : J. Longlade
 Date Collected : 12/07/89
 Received : 12/08/89
 Tested : 12/11/89 at: 941

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	01:39	24:00	48:00	%
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
15	0	0	0	0	0
5	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
 LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02890285

TEST ELAPSED TIME
 CONC. % 00:00 01:39 24:00 48:00

100	pH	7.6			7.7
	O2 ppm	9.9			8.1
	Cond.	201			209
	Temp(C)	20.0	20.0	20.0	20.0
60	pH	7.8			7.8
	O2 ppm	9.4			8.1
	Cond.	246			250
	Temp(C)	20.0	20.0	20.0	20.0
30	pH	7.9			7.8
	O2 ppm	9.2			8.1
	Cond.	278			283
	Temp(C)	20.0	20.0	20.0	20.0
15	pH	7.9			7.8
	O2 ppm	9.2			8.2
	Cond.	294			296
	Temp(C)	20.0	20.0	20.0	20.0
5	pH	7.9			7.8
	O2 ppm	9.1			8.2
	Cond.	304			306
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH	7.9			7.7
	O2 ppm	9.1			8.3
	Cond.	305			303
	Temp(C)	20.0	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 05900028

TEST CONDITIONS

Company : AKZO Chemicals Ltd.
 Sarnia, ONT
 (28690006)
 Region : Southwest
 Industry : Organic Chemical

 Control point : OT cooling water, (100)

 Laboratory : Pollutech
 Sampling Method : Grab
 Sampled By : C.Ferguson
 Date Collected : 02/07/90
 Received : 02/07/90
 Tested : 02/08/90 at: 1200

 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00	48:00	%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal
 95% fid. limits : 0.0 - 0.0 %
 Comments :

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900028

TEST CONC. %	ELAPSED TIME	
	00:00	48:00

100	pH	7.9	8.0
	O2 ppm	8.8	9.0
	Cond.	200	205
	Temp(C)	20.0	20.0
50	pH	8.1	8.0
	O2 ppm	8.6	9.0
	Cond.	360	358
	Temp(C)	20.0	20.0
26	pH	8.2	8.0
	O2 ppm	8.6	9.0
	Cond.	430	430
	Temp(C)	20.0	20.0
13	pH	8.2	8.1
	O2 ppm	8.6	9.2
	Cond.	470	460
	Temp(C)	20.0	20.0
6	pH	8.2	8.2
	O2 ppm	8.6	9.1
	Cond.	488	483
	Temp(C)	20.0	20.0
Control	pH	8.1	8.2
	O2 ppm	8.6	9.2
	Cond.	500	500
	Temp(C)	20.0	20.0

COMPANY: Amoco Canada Petroleum Canada Ltd., Sarnia
(104330204)
SECTOR: Organic Chemical
REGION: Southwest

SUMMARY

The data for two trout bioassays, conducted on storm water samples collected between October 1989 and March 1990, were provided by Amoco Canada Petroleum Canada Limited. One storm water sample had a 96 hour LC50 > 100 %, while the other sample was determined to have been non-acutely lethal to test fish.

Storm Water

03900087 sampled: 02/07/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900190 sampled: 03/12/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

Emergency Overflow

Emergency Overflow

Storm Water

Batch Discharge Effluent

Batch Discharge Effluent

TOXICITY TEST REPORT

Sample: 03900087

TEST CONDITIONS

Company : Amoco Canada Petroleum Canada Ltd.
 Sarnia, ONT
 (104330204)
 Region : Southwest
 Industry : Organic Chemical
 Control point : Storm Water, (100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : Ken Temple
 Date Collected : 02/07/90
 Received : 02/08/90
 Tested : 02/08/90 at: 1630
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
	%	00:00	24:00	48:00	72:00	96:00
100	0	6	6	6	6	60
65	0	0	0	1	1	10
40	0	0	0	1	1	10
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	1	10

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900087

TEST ELAPSED TIME
 CONC. % 00:00 24:00 48:00 72:00 96:00

100	pH	7.8	8.0			
	O2 ppm	7.0	8.2			
	Cond.	2540	2540			
	Temp(C)	14.5	15.0	15.0	15.0	15.0
65	pH	7.7				8.1
	O2 ppm	7.5				7.9
	Cond.	1850				1892
	Temp(C)	14.5	15.0	15.0	15.0	15.0
40	pH	7.8				8.2
	O2 ppm	7.8				8.1
	Cond.	1358				1378
	Temp(C)	14.5	15.0	15.0	15.0	15.0
20	pH	7.9				8.5
	O2 ppm	8.4				9.4
	Cond.	963				973
	Temp(C)	14.5	15.0	15.0	15.0	15.0
10	pH	7.9				8.5
	O2 ppm	8.4				9.3
	Cond.	754				762
	Temp(C)	14.5	15.0	15.0	15.0	15.0
5	pH	7.9				8.4
	O2 ppm	8.6				9.0
	Cond.	644				652
	Temp(C)	14.5	15.0	15.0	15.0	15.0
Control	pH	7.9				8.5
	O2 ppm	8.5				9.5
	Cond.	543				542
	Temp(C)	14.5	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 03900190

TEST CONDITIONS

Company : Amoco Canada Petroleum Canada Ltd.
 Sarnia, ONT
 (104330204)
 Region : Southwest
 Industry : Organic Chemical
 Control point : Storm Water, (100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : S. McKay
 Date Collected : 03/12/90
 Received : 03/13/90
 Tested : 03/13/90 at: 1445
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY	
	%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900190

TEST CONC. %	ELAPSED TIME					
		00:00	24:00	48:00	72:00	96:00
100	pH	7.7				7.8
	O2 ppm	8.4				8.8
	Cond.	1049				1052
	Temp(C)	15.0	15.0	16.0	14.5	16.0
65	pH	7.8				7.7
	O2 ppm	8.8				6.3
	Cond.	870				871
	Temp(C)	15.0	15.0	16.0	14.5	16.0
40	pH	7.8				8.0
	O2 ppm	9.0				9.1
	Cond.	744				740
	Temp(C)	15.0	15.0	16.0	14.5	16.0
20	pH	7.8				8.2
	O2 ppm	9.2				9.3
	Cond.	652				642
	Temp(C)	15.0	15.0	16.0	14.5	16.0
10	pH	7.8				8.1
	O2 ppm	9.3				9.0
	Cond.	595				587
	Temp(C)	15.0	15.0	16.0	14.5	16.0
5	pH	7.8				8.2
	O2 ppm	9.4				9.4
	Cond.	574				561
	Temp(C)	15.0	15.0	16.0	14.5	16.0
Control	pH	7.8				8.1
	O2 ppm	9.4				8.9
	Cond.	550				539
	Temp(C)	15.0	15.0	16.0	14.5	16.0

COMPANY: Amoco Canada Petroleum Canada Ltd., Sarnia
(104330204)
SECTOR: Organic Chemical
REGION: Southwest

SUMMARY

The monitoring regulation did not come into force until February 1990 for Amoco Canada Petroleum Ltd. of Sarnia. This company has submitted data for two *Daphnia magna* acute lethality toxicity tests conducted on samples of effluent from storm water outfall #100. Both samples were not acutely lethal to *Daphnia*.

Storm Water

03900087 sampled: 02/07/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900190 sampled: 03/12/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

Emergency Overflow

Emergency Overflow

Storm Water

Batch Discharge Effluent

Batch Discharge Effluent

TOXICITY TEST REPORT

Sample: 03900087

TEST CONDITIONS

Company : Amoco Canada Petroleum Canada Ltd.
 Sarnia, ONT
 (104330204)
 Region : Southwest
 Industry : Organic Chemical
 Control point : Storm Water, (100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : K. Temple
 Date Collected : 02/07/90
 Received : 02/08/90
 Tested : 02/08/90 at: 1425

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E			TOTAL MORTALITY	
	%	00:00	24:00	48:00	%
100	0	0	0		0
50	0	0	0		0
25	0	0	0		0
13	0	0	0		0
6	0	0	0		0
Control	0	0	0		0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
 LC50 Calculated By :TOXICITY TEST PARAMETERS

Sample Number: 03900087

TEST CONC. %	E L A P S E D T I M E		
	00:00	24:00	48:00

100	pH	7.5	7.7
	O2 ppm	4.8	2.0
	Cond.	2530	2520
	Temp(C)	20.0	20.5
50	pH	7.9	7.8
	O2 ppm	6.9	3.7
	Cond.	1440	1428
	Temp(C)	20.0	20.5
25	pH	8.3	8.0
	O2 ppm	7.7	5.8
	Cond.	881	871
	Temp(C)	20.0	20.5
13	pH	8.3	8.2
	O2 ppm	8.2	7.1
	Cond.	599	592
	Temp(C)	20.0	20.5
6	pH	8.4	8.3
	O2 ppm	8.4	7.6
	Cond.	436	433
	Temp(C)	20.0	20.5
Control	pH	8.6	8.4
	O2 ppm	8.7	8.1
	Cond.	298	297
	Temp(C)	20.0	20.5

TOXICITY TEST REPORT

Sample: 03900190

TEST CONDITIONS

Company : Amoco Canada Petroleum Canada Ltd.
 : Sarnia, ONT
 : (104330204)
 Region : Southwest
 Industry : Organic Chemical
 Control point : Storm Water, (100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : S. McLay
 Date Collected : 03/12/90
 Received : 03/13/90
 Tested : 03/13/90 at: 1330
 Type of Bioassay : STATIC
 : (Daphnia magna Acute Lethality Toxicity
 : Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal
 95% fid. limits : 0.0 - 0.0 %
 Comments : Non lethal

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900190

TEST CONC. %	E L A P S E D T I M E		
	00:00	24:00	48:00

100	pH	7.8	7.6
	O2 ppm	8.3	4.2
	Cond.	1030	1024
	Temp(C)	20.0	20.5
50	pH	8.1	7.8
	O2 ppm	8.6	6.2
	Cond.	675	668
	Temp(C)	20.0	20.5
25	pH	8.3	8.0
	O2 ppm	8.8	7.4
	Cond.	491	487
	Temp(C)	20.0	20.5
13	pH	8.4	8.1
	O2 ppm	8.9	7.7
	Cond.	397	394
	Temp(C)	20.0	20.5
6	pH	8.4	8.2
	O2 ppm	9.0	8.0
	Cond.	346	341
	Temp(C)	20.0	20.5
Control	pH	8.4	8.3
	O2 ppm	9.0	8.1
	Cond.	299	299
	Temp(C)	20.0	20.5

COMPANY: B.F. Goodrich Canada Inc., Thorold
(370304)
SECTOR: Organic Chemical
REGION: West Central

SUMMARY

The data for six trout bioassays, conducted on combined effluent samples collected between October 1989 and March 1990, were provided by B.F. Goodrich Canada Incorporated. All six combined effluent samples were determined to have been non-acutely lethal to test fish. An additional audit sample collected from this combined discharge in November was tested by the O.M.E. laboratory and was also determined to have been non-acutely lethal.

combined effluent

08890442	sampled: 10/18/89	non-lethal
	95% fid. limits: 0.0 -	0.0 %
	comments:	
08890472	sampled: 11/16/89	non-lethal
	95% fid. limits: 0.0 -	0.0 %
	comments:	
01890277	sampled: 11/29/89	non-lethal
	95% fid. limits: 0.0 -	0.0 %
	comments: MISA audit sample.	
08890512	sampled: 12/19/89	non-lethal
	95% fid. limits: 0.0 -	0.0 %
	comments:	
08900061	sampled: 01/24/90	LC50: >100 %
	95% fid. limits: 0.0 -	0.0 %
	comments:	
08900101	sampled: 02/12/90	non-lethal
	95% fid. limits: 0.0 -	0.0 %
	comments:	
08900211	sampled: 03/12/90	non-lethal
	95% fid. limits: 0.0 -	0.0 %
	comments:	

B.F. Goodrich Canada Inc. (continued)

waste site

rain gauge

intake water

TOXICITY TEST REPORT

Sample: 08890442

TEST CONDITIONS

Company : B.F. Goodrich Canada Inc.
 Thorold, ONT
 (370304)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : Integrated
 Sampling Method : grab
 Sampled By : M. Whitwell
 Date Collected : 10/18/89
 Received : 10/19/89
 Tested : 10/20/89 at: 1330
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME								TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	25:10	48:00	72:00	96:00	%
100	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 08890442

TEST CONC.	ELAPSED TIME							
%	00:00	01:00	02:00	04:00	25:10	48:00	72:00	96:00
100	pH	7.8						7.2
	O2 ppm	8.6						9.3
	Cond.	285						572
	Temp(C)	15.0						15.0
65	pH	7.7						7.3
	O2 ppm	8.3						9.7
	Cond.	310						526
	Temp(C)	15.0						15.0
40	pH	7.6						7.4
	O2 ppm	8.2						9.4
	Cond.	328						494
	Temp(C)	15.0						15.0
30	pH	7.5						7.5
	O2 ppm	7.4						9.5
	Cond.	336						481
	Temp(C)	15.0						15.0
20	pH	7.7						7.4
	O2 ppm	7.6						9.4
	Cond.	343						468
	Temp(C)	15.0						15.0
10	pH	7.4						7.5
	O2 ppm	7.1						9.3
	Cond.	350						455
	Temp(C)	15.0						15.0
Control	pH	7.0						7.7
	O2 ppm	8.3						10.0
	Cond.	340						509
	Temp(C)	15.0						15.0

TOXICITY TEST REPORT

Sample: 08890472

TEST CONDITIONS

Company : B.F. Goodrich Canada Inc.
 Thorold, ONT
 (370304)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : Integrated
 Sampling Method : grab
 Sampled By : M. Whitwell
 Date Collected : 11/16/89
 Received : 11/17/89
 Tested : 11/17/89 at: 1230
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME								TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 08890472

TEST CONC. %	ELAPSED TIME							
	00:00	01:00	02:00	04:00	24:00	48:00	72:00	96:00
100	pH	7.5						7.9
	O2 ppm	10.4						9.1
	Cond.	280						370
	Temp(C)	9.0			15.0			15.0
65	pH	7.4						8.2
	O2 ppm	9.5						9.2
	Cond.	350						500
	Temp(C)	10.0			15.0			15.0
40	pH	7.4						8.4
	O2 ppm	8.9						9.2
	Cond.	430						490
	Temp(C)	10.0			15.0			15.0
30	pH	7.3						8.4
	O2 ppm	9.3						9.5
	Cond.	440						510
	Temp(C)	11.0			15.0			15.0
10	pH	7.2						8.4
	O2 ppm	7.4						8.0
	Cond.	520						530
	Temp(C)	11.0			15.0			15.0
Control	pH	7.2						7.9
	O2 ppm	7.3						7.7
	Cond.	700						520
	Temp(C)	12.0			15.0			15.0

TOXICITY TEST REPORT

Sample: 01890277

TEST CONDITIONS

Company : B.F. Goodrich Canada Inc.
 Thorold, ONT
 (370304)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : MOE
 Sampling Method : grab
 Sampled By : M. Smithson
 Date Collected : 11/29/89
 Received : 11/30/89
 Tested : 12/01/89 at: 1130
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME										TOTAL MORTALITY
	%	00:00	01:10	01:00	02:00	04:00	25:10	51:15	76:10	96:00	%
100	0	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA audit sample.

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01890277

TEST CONC. %	ELAPSED TIME									
		00:00	01:10	01:00	02:00	04:00	25:10	51:15	76:10	96:00
100	pH		7.2		7.5		7.5	7.5	7.7	7.
	O2 ppm		4.4		8.6		8.5	8.5	10.0	9.
	Cond.		3900		3600		3625	3675	3600	375
	Temp(C)		14.0		14.0		14.0	14.0	15.0	14.
65	pH				7.8		7.6	7.7	7.7	7.
	O2 ppm				10.1		9.1	9.2	9.8	9.
	Cond.				2500		2550	2500	2550	260
	Temp(C)				14.0		14.0	14.0	15.0	14.
40	pH				7.6		7.3	7.3	7.3	7.
	O2 ppm				9.5		7.5	8.0	9.0	8.
	Cond.				1700		1725	1700	1700	170
	Temp(C)				14.0		14.0	14.0	15.0	14.
30	pH				7.7		7.5	7.5	7.8	7.
	O2 ppm				9.8		8.8	9.2	9.7	9.
	Cond.				1360		1350	1325	1300	140
	Temp(C)				14.0		14.0	14.0	15.0	14.
20	pH				7.8		7.7	7.7	7.8	7.
	O2 ppm				9.8		9.3	9.4	10.0	9.
	Cond.				1000		990	950	1000	100
	Temp(C)				14.0		14.0	14.0	15.0	14.
10	pH				7.9		7.7	7.6	7.8	7.
	O2 ppm				10.2		9.2	8.8	10.2	9.
	Cond.				600		500	590	600	62
	Temp(C)				14.0		14.0	14.0	15.0	14.
Control	pH				7.9		7.2	7.1	7.5	7.
	O2 ppm				9.9		7.1	7.5	10.0	9.
	Cond.				250		240	230	260	26
	Temp(C)				14.0		14.0	14.0	14.0	14.

TOXICITY TEST REPORT

Sample: 08890512

TEST CONDITIONS

Company : B.F. Goodrich Canada Inc.
 Thorold, ONT
 (370304)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : Integrated
 Sampling Method : grab
 Sampled By : M. Whitwell
 Date Collected : 12/19/89
 Received : 12/20/89
 Tested : 12/20/89 at: 1600
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME								TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:05	71:30	94:00	%
100	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 08890512

TEST CONC. %	ELAPSED TIME							
	00:00	01:00	02:00	04:00	24:00	48:05	71:30	94:00
100	pH		7.5					8.5
	O2 ppm		7.2					6.7
	Cond.		6000					6200
	Temp(C)		15.0					15.5
65	pH		7.7					8.5
	O2 ppm		7.1					7.1
	Cond.		4000					4100
	Temp(C)		15.0					15.5
40	pH		7.5					8.5
	O2 ppm		7.1					7.2
	Cond.		2800					3000
	Temp(C)		15.0					15.5
30	pH		7.6					8.4
	O2 ppm		7.1					7.2
	Cond.		2300					2350
	Temp(C)		15.0					15.5
10	pH		7.7					8.3
	O2 ppm		7.0					6.9
	Cond.		1300					1300
	Temp(C)		15.0					15.5
5	pH		7.7					8.2
	O2 ppm		7.2					7.4
	Cond.		980					1050
	Temp(C)		15.0					15.5
Control	pH		7.8					7.9
	O2 ppm		7.2					7.3
	Cond.		750					750
	Temp(C)		15.0					15.5

TOXICITY TEST REPORT

Sample: 08900061

TEST CONDITIONS

Company : B.F. Goodrich Canada Inc.
 Thorold, ONT
 (370304)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : integrated
 Sampling Method : grab
 Sampled By : Mark Whitwell
 Date Collected : 01/24/90
 Received : 01/25/90
 Tested : 01/26/90 at: 1100
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME								TOTAL MORTALITY	
%	00:00	01:00	02:00	04:00	24:00	48:15	72:50	96:50		%
100	0	0	0	0	0	0	0	1	10	
65	0	0	0	0	0	0	0	0	0	
40	0	0	0	0	0	0	0	0	0	
30	0	0	0	0	0	0	0	0	0	
10	0	0	0	1	1	1	1	1	10	
5	0	0	0	0	0	0	0	0	0	
Control	0	0	0	0	0	0	0	0	0	

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 08900061

TEST CONC. %	ELAPSED TIME							
	00:00	01:00	02:00	04:00	24:00	48:15	72:50	96:50
100	pH	8.0						8.1
	O2 ppm	8.9						9.5
	Cond.	580						620
	Temp(C)	15.5						16.0
65	pH	8.0						8.3
	O2 ppm	9.5						9.6
	Cond.	640						655
	Temp(C)	15.5						16.0
40	pH	8.0						8.4
	O2 ppm	9.6						9.7
	Cond.	680						645
	Temp(C)	15.5						16.0
30	pH	8.1						8.4
	O2 ppm	9.6						9.8
	Cond.	700						615
	Temp(C)	15.5						16.0
10	pH	8.1						8.4
	O2 ppm	9.2						9.6
	Cond.	720						570
	Temp(C)	15.5						16.0
5	pH	8.1						8.4
	O2 ppm	9.1						9.5
	Cond.	720						570
	Temp(C)	15.5						16.0
Control	pH	8.0						8.4
	O2 ppm	9.0						9.6
	Cond.	700						570
	Temp(C)	15.5						16.0

TOXICITY TEST REPORT

Sample: 08900101

TEST CONDITIONS

Company : B.F. Goodrich Canada Inc.
 Thorold, ONT
 (370304)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : integrated
 Sampling Method : grab
 Sampled By : Mark Whitwell
 Date Collected : 02/12/90
 Received : 02/16/90
 Tested : 02/16/90 at: 1230
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME								TOTAL MORTALITY
%	00:00	01:15	02:05	04:15	24:10	48:10	73:10	97:00	%
100	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 08900101

TEST CONC. %	ELAPSED TIME							
	00:00	01:15	02:05	04:15	24:10	48:10	73:10	97:00
100	pH		7.3					8.3
	O2 ppm		8.8					8.2
	Cond.		510					575
	Temp(C)		16.0					16.0
65	pH		7.5					8.4
	O2 ppm		8.7					8.2
	Cond.		580					620
	Temp(C)		16.0					16.0
40	pH		7.7					8.4
	O2 ppm		8.6					8.2
	Cond.		610					680
	Temp(C)		16.0					16.0
30	pH		7.7					8.5
	O2 ppm		8.6					8.2
	Cond.		685					650
	Temp(C)		16.0					16.0
10	pH		7.7					8.4
	O2 ppm		8.6					8.2
	Cond.		740					660
	Temp(C)		16.0					16.0
5	pH		7.7					8.5
	O2 ppm		8.6					8.3
	Cond.		750					600
	Temp(C)		16.0					16.0
Control	pH		7.7					8.5
	O2 ppm		8.7					8.3
	Cond.		750					590
	Temp(C)		16.0					16.0

TOXICITY TEST REPORT

Sample: 08900211

TEST CONDITIONS

Company : B.F. Goodrich Canada Inc.
 Thorold, ONT
 (370304)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : integrated
 Sampling Method : grab
 Sampled By : Mark Whitwell
 Date Collected : 03/12/90
 Received : 03/16/90
 Tested : 03/16/90 at: 1130
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E								TOTAL MORTALITY
	%	00:00	01:05	02:10	04:00	25:05	50:10	73:10	96:15
100	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 08900211

TEST CONC. %	E L A P S E D T I M E							
		00:00	01:05	02:10	04:00	25:05	50:10	73:10 96:15
100	pH			7.6				8.1
	O2 ppm			8.3				8.4
	Cond.			610				625
	Temp(C)			17.0				15.0
65	pH			7.6				8.2
	O2 ppm			8.1				8.4
	Cond.			670				775
	Temp(C)			17.0				15.0
40	pH			7.6				8.1
	O2 ppm			8.1				8.5
	Cond.			680				700
	Temp(C)			17.0				15.0
30	pH			7.6				8.1
	O2 ppm			8.0				8.5
	Cond.			700				675
	Temp(C)			17.0				15.0
10	pH			7.5				8.1
	O2 ppm			7.9				8.4
	Cond.			700				650
	Temp(C)			17.0				15.0
5	pH			7.4				7.9
	O2 ppm			7.4				8.4
	Cond.			705				725
	Temp(C)			17.0				15.0
Control	pH			7.7				8.5
	O2 ppm			8.7				8.5
	Cond.			680				700
	Temp(C)			17.0				15.0

COMPANY: B.F. Goodrich Canada Inc., Thorold
(370304)
SECTOR: Organic Chemical
REGION: West Central

SUMMARY

Data for six Daphnia magna acute lethality toxicity tests conducted on samples of combined effluent collected between October 1989 and March 1990 have been submitted by B.F. Goodrich Canada Inc. of Thorold. Two samples were not acutely lethal to Daphnia and four other samples have LC50s greater than 100%. One sample of combined effluent was tested in the Ministry laboratory in November. This sample had one mortality in the 100% test concentration.

combined effluent

08890444 sampled: 10/18/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

08890474 sampled: 11/16/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

02890277 sampled: 11/22/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit/high conductivity

08890511 sampled: 12/19/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

08900062 sampled: 01/24/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

08900102 sampled: 02/12/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

08900212 sampled: 03/12/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

B.F. Goodrich Canada Inc. (continued)

waste site

rain gauge

intake water

TOXICITY TEST REPORT

Sample: 08890444

TEST CONDITIONS

Company : B.F. Goodrich Canada Inc.
 Thorold, ONT
 (370304)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : Integrated
 Sampling Method : grab
 Sampled By : M. Whitwell
 Date Collected : 10/18/89
 Received : 10/19/89
 Tested : 10/20/89 at: 1430
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:00	%
100	0	0	0	0	1	1	8
50	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0
15	0	0	1	0	0	1	8
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 08890444

TEST CONC.	ELAPSED TIME					
%	00:00	01:00	02:00	04:00	24:00	48:00

100	pH	6.4				7.5
	O2 ppm	8.0				5.2
	Cond.	358				479
	Temp(C)	20.0				20.0
50	pH	6.8				7.8
	O2 ppm	8.3				4.8
	Cond.	312				394
	Temp(C)	20.0				20.0
25	pH	6.8				7.8
	O2 ppm	8.6				4.8
	Cond.	289				359
	Temp(C)	20.0				20.0
15	pH	7.0				7.8
	O2 ppm	8.2				5.2
	Cond.	280				356
	Temp(C)	20.0				20.0
5	pH	7.0				7.9
	O2 ppm	8.5				4.8
	Cond.	271				346
	Temp(C)	20.0				20.0
Control	pH	7.0				7.9
	O2 ppm	8.5				4.8
	Cond.	271				346
	Temp(C)	20.0				20.0

TOXICITY TEST REPORT

Sample: 08890474

TEST CONDITIONS

Company : B.F. Goodrich Canada Inc.
 Thorold, ONT
 (370304)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : Integrated
 Sampling Method : grab
 Sampled By : M. Whitwell
 Date Collected : 11/16/89
 Received : 11/17/89
 Tested : 11/17/89 at: 1445
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E						TOTAL MORTALITY	
	%	00:00	01:00	02:00	04:00	24:25	48:00	%
100	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 08890474

TEST CONC.	E L A P S E D T I M E					
	%	00:00	01:00	02:00	04:00	24:25 48:00
100	pH	7.8				8.1
	O2 ppm	9.7				9.1
	Cond.	340				470
	Temp(C)	19.0				19.0
50	pH	7.7				8.2
	O2 ppm	9.7				9.4
	Cond.	311				369
	Temp(C)	19.0				19.0
25	pH	7.7				8.2
	O2 ppm	9.7				9.6
	Cond.	290				300
	Temp(C)	19.0				19.0
15	pH	7.7				8.3
	O2 ppm	9.7				9.7
	Cond.	312				302
	Temp(C)	19.0				19.0
5	pH	7.7				8.3
	O2 ppm	9.7				9.7
	Cond.	272				283
	Temp(C)	19.0				19.0
Control	pH	7.6				8.4
	O2 ppm	9.7				9.8
	Cond.	280				290
	Temp(C)	19.0				19.0

TOXICITY TEST REPORT

Sample: 02890277

TEST CONDITIONS

Company : B.F. Goodrich Canada Inc.
 Thorold, ONT
 (370304)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : MOE
 Sampling Method : grab
 Sampled By : M. Smithson
 Date Collected : 11/22/89
 Received : 11/30/89
 Tested : 11/30/89 at: 1245
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E				TOTAL MORTALITY	
	%	00:00	01:00	24:00	48:00	%
100	0	0	0	1		8
60	0	0	0	0		0
30	0	0	0	0		0
15	0	0	0	0		0
5	0	0	0	0		0
Control	0	0	0	0		0

48 Hour LC50 : Non-lethal
 95% fid. limits : 0.0 - 0.0 %
 Comments : MISA Audit/high conductivity

SLOPE of Mortality Curve :
 LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02890277

TEST CONC.	E L A P S E D T I M E			
	%	00:00	01:00	24:00

100	pH	7.2			7.4
	O2 ppm	5.1			6.4
	Cond.	5540			5530
	Temp(C)	20.0	20.0	20.0	20.0
60	pH	7.5			7.6
	O2 ppm	7.4			7.3
	Cond.	3510			3530
	Temp(C)	20.0	20.0	20.0	20.0
30	pH	7.7			7.7
	O2 ppm	8.5			7.9
	Cond.	1920			1960
	Temp(C)	20.0	20.0	20.0	20.0
15	pH	7.9			7.7
	O2 ppm	8.9			8.1
	Cond.	1120			1119
	Temp(C)	20.0	20.0	20.0	20.0
5	pH	8.0			7.7
	O2 ppm	9.1			8.1
	Cond.	591			591
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH	8.0			7.9
	O2 ppm	9.3			8.4
	Cond.	290			307
	Temp(C)	20.0	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 08890511

TEST CONDITIONS

Company : B.F. Goodrich Canada Inc.
Thorold, ONT
(370304)
Region : West Central
Industry : Organic Chemical
Control point : combined effluent, (100)
Laboratory : Integrated
Sampling Method : grab
Sampled By : M. Whitwell
Date Collected : 12/19/89
Received : 12/20/89
Tested : 12/20/89 at: 1600
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY %
	%	00:00	01:14	02:00	04:00	24:10 48:00	
100	0	0	0	0	0	1	8
50	0	0	0	0	1	0	0
25	0	0	0	0	0	0	0
15	0	0	0	0	0	2	16
5	0	0	0	0	0	1	8
Control	0	0	0	0	1	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

TOXICITY TEST PARAMETERS

Sample Number: 08890511

TEST CONC. %	ELAPSED TIME					
	00:00	01:14	02:00	04:00	24:10	48:00

100	pH	7.3	7.9
	O2 ppm	8.0	4.0
	Cond.	6000	5500
	Temp(C)	20.0	19.0
50	pH	7.4	8.0
	O2 ppm	7.9	5.0
	Cond.	3200	2900
	Temp(C)	20.0	19.0
25	pH	7.5	8.1
	O2 ppm	7.8	4.5
	Cond.	1700	1600
	Temp(C)	20.0	19.0
15	pH	7.4	8.1
	O2 ppm	7.0	6.0
	Cond.	1300	1100
	Temp(C)	20.0	19.0
5	pH	7.5	8.2
	O2 ppm	7.5	5.5
	Cond.	700	600
	Temp(C)	20.0	19.0
Control	pH	7.4	8.1
	O2 ppm	7.8	7.5
	Cond.	510	400
	Temp(C)	20.0	19.0

TOXICITY TEST REPORT

Sample: 08900062

TEST CONDITIONS

Company : B.F. Goodrich Canada Inc.
 Thorold, ONT
 (370304)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : integrated
 Sampling Method : grab
 Sampled By : Mark Whitwell
 Date Collected : 01/24/90
 Received : 01/25/90
 Tested : 01/26/90 at: 1045
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E						TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	25:00	50:10	%
100	0	0	0	0	2	3	25
50	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	1	8

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 08900062

TEST CONC. %	E L A P S E D T I M E
	00:00 01:00 02:00 04:00 25:00 50:10

100	pH	7.4	6.9
	O2 ppm	7.5	7.0
	Cond.	550	600
	Temp(C)	20.0	20.0
50	pH	8.0	7.4
	O2 ppm	7.8	7.3
	Cond.	480	500
	Temp(C)	20.0	20.0
25	pH	8.1	7.6
	O2 ppm	8.1	7.6
	Cond.	460	450
	Temp(C)	20.0	20.0
15	pH	8.1	7.7
	O2 ppm	8.1	7.6
	Cond.	450	440
	Temp(C)	20.0	20.0
5	pH	8.4	7.8
	O2 ppm	8.1	7.6
	Cond.	400	425
	Temp(C)	20.0	20.0
Control	pH	7.8	7.9
	O2 ppm	8.1	7.6
	Cond.	400	425
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 08900102

TEST CONDITIONS

Company : B.F. Goodrich Canada Inc.
 Thorold, ONT
 (370304)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : integrated
 Sampling Method : grab
 Sampled By : Mark Whitwell
 Date Collected : 02/12/90
 Received : 02/16/90
 Tested : 02/16/90 at: 1345
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:35	02:05	04:10	24:25	48:25	%
100	0	0	0	0	0	2	16
49	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 08900102

TEST CONC. %	ELAPSED TIME					
	00:00	01:35	02:05	04:10	24:25	48:25

100	pH	7.4	7.5
	O2 ppm	6.3	2.8
	Cond.	515	610
	Temp(C)	20.0	20.0
49	pH	7.9	7.8
	O2 ppm	7.0	3.6
	Cond.	430	475
	Temp(C)	20.0	20.0
29	pH	8.2	8.1
	O2 ppm	7.3	4.4
	Cond.	410	450
	Temp(C)	20.0	20.0
11	pH	8.3	8.4
	O2 ppm	7.6	5.1
	Cond.	380	410
	Temp(C)	20.0	20.0
4	pH	8.2	8.4
	O2 ppm	7.6	5.9
	Cond.	370	400
	Temp(C)	20.0	20.0
Control	pH	8.2	8.4
	O2 ppm	7.8	6.4
	Cond.	365	400
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 08900212

TEST CONDITIONS

Company : B.F. Goodrich Canada Inc.
 Thorold, ONT
 (370304)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : integrated
 Sampling Method : grab
 Sampled By : Mark Whitwell
 Date Collected : 03/12/90
 Received : 03/16/90
 Tested : 03/16/90 at: 1330
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY %
	%	00:00	01:05	02:00	04:00	24:00 48:35	
100	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : Non-lethal
 95% fid. limits : 0.0 - 0.0 %
 Comments :

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 08900212

TEST CONC. %	ELAPSED TIME					
		00:00	01:05	02:00	04:00	24:00 48:35
100	pH	7.8				8.4
	O2 ppm	7.1				6.6
	Cond.	580				610
	Temp(C)	20.0				19.0
50	pH	7.9				8.3
	O2 ppm	7.1				6.6
	Cond.	555				570
	Temp(C)	20.0				19.0
25	pH	7.9				8.4
	O2 ppm	7.2				6.7
	Cond.	550				560
	Temp(C)	20.0				19.0
15	pH	7.9				8.4
	O2 ppm	7.1				6.6
	Cond.	540				550
	Temp(C)	20.0				19.0
5	pH	7.9				8.4
	O2 ppm	7.2				6.7
	Cond.	525				545
	Temp(C)	20.0				19.0
Control	pH	7.8				8.4
	O2 ppm	7.7				6.7
	Cond.	525				545
	Temp(C)	20.0				19.0

COMPANY: BASF Canada Inc., Sarnia
(740407)
SECTOR: Organic Chemical
REGION: Southwest

SUMMARY

The data for six trout bioassays, conducted on cooling water and intake water samples collected between October 1989 and March 1990, were provided by BASF Canada Incorporated. Cooling water samples from both discharge locations, control points 0100 and 0200, were non-acutely lethal to test fish. Intake water samples were also determined to have been non-acutely lethal.

OT cooling water

05890108 sampled: 11/15/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900033 sampled: 02/13/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

OT cooling water

05890107 sampled: 11/15/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: D

05900034 sampled: 02/13/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

rain gauge

intake water

05890106 sampled: 11/15/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900031 sampled: 02/13/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

BASF Canada Inc. (continued)

TOXICITY TEST REPORT

Sample: 05890108

TEST CONDITIONS

Company : BASF Canada Inc.
Sarnia, ONT
(740407)
Region : Southwest
Industry : Organic Chemical
Control point : OT cooling water, (100)
Laboratory : Pollutech
Sampling Method : grab
Sampled By : C. Ferguson
Date Collected : 11/15/89
Received : 11/15/89
Tested : 11/16/89 at: 1230
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	22:10	49:00	73:10	96:00	%
100	0	0	0	0	0	0
75	0	0	0	0	0	0
56	0	0	0	0	0	0
25	0	0	0	0	0	0
10	0	0	0	0	0	0
1	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 05890108

TEST CONC.	ELAPSED TIME				
%	00:00	22:10	49:00	73:10	96:00

100	pH	7.9	7.8	7.8	7.8	7.9
	O2 ppm	10.0	10.2	9.8	9.6	10.4
	Cond.	165				162
	Temp(C)	15.0	15.0	15.0	15.0	15.0
75	pH	7.6	7.7	7.8	7.8	7.9
	O2 ppm	9.9	10.2	9.5	9.5	10.3
	Cond.	165				162
	Temp(C)	15.0	15.0	15.0	15.0	15.0
56	pH	7.4	7.7	7.7	7.8	7.9
	O2 ppm	9.7	10.4	9.8	9.7	10.2
	Cond.	165				162
	Temp(C)	15.0	15.0	15.0	15.0	15.0
25	pH	7.3	7.8	7.7	7.9	7.9
	O2 ppm	9.6	10.3	10.0	9.8	10.3
	Cond.	165				162
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.3	7.7	7.7	7.8	7.9
	O2 ppm	9.7	10.3	9.9	9.7	10.2
	Cond.	166				166
	Temp(C)	15.0	15.0	15.0	15.0	15.0
1	pH	7.3	7.7	7.7	7.8	7.9
	O2 ppm	9.6	10.2	10.2	9.9	10.3
	Cond.	168				169
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.2	7.6	7.7	7.7	7.8
	O2 ppm	9.9	10.0	9.5	9.5	9.9
	Cond.	165				165
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.2	7.8	7.8	7.8	7.9
	O2 ppm	9.8	10.2	9.8	10.2	10.2
	Cond.	165				162
	Temp(C)	15.0	15.0	15.0	15.0	15.0

MISA Trout

TOXICITY TEST REPORT

Sample: 05900033

TEST CONDITIONS

Company : BASF Canada Inc.
Sarnia, ONT
(740407)
Region : Southwest
Industry : Organic Chemical
Control point : OT cooling water, (100)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C.Ferguson
Date Collected : 02/13/90
Received : 02/13/90
Tested : 02/13/90 at: 1500
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	25:00	43:00	67:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900033

TEST ELAPSED TIME
CONC. % 00:00 25:00 43:00 67:00 96:00

100	pH	7.9	7.8
	O2 ppm	9.0	8.6
	Cond.	168	172
	Temp(C)	15.0	15.0
100	pH	7.9	7.8
	O2 ppm	9.2	8.7
	Cond.	168	175
	Temp(C)	15.0	15.0
Control	pH	7.6	7.7
	O2 ppm	10.0	9.6
	Cond.	158	175
	Temp(C)	15.0	15.0
Control	pH	7.6	7.7
	O2 ppm	10.2	9.6
	Cond.	160	175
	Temp(C)	15.0	15.0

TOXICITY TEST REPORT

Sample: 05890107

TEST CONDITIONS

Company : BASF Canada Inc.
Sarnia, ONT
(740407)
Region : Southwest
Industry : Organic Chemical
Control point : OT cooling water, (200)
Laboratory : Pollutech
Sampling Method : grab
Sampled By : C. Ferguson
Date Collected : 11/15/89
Received : 11/15/89
Tested : 11/16/89 at: 1215
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	22:25	49:15	72:25	96:00	%
100	0	0	0	0	0	0
75	0	0	0	0	0	0
56	0	0	0	0	0	0
25	0	0	0	0	0	0
10	0	0	0	0	0	0
1	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0
96 Hour LC50	: Non-lethal					
95% fid. limits	: 0.0 - 0.0 %					
Comments	: D					

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 05890107

TEST CONC. %	ELAPSED TIME				
	00:00	22:25	49:15	72:25	96:00

100	pH	7.6	7.9	7.8	7.9	7.8
	O2 ppm	9.2	10.3	10.1	10.5	10.5
	Cond.	170				168
	Temp(C)	15.0	15.0	15.0	15.0	15.0
75	pH	7.4	7.8	7.8	7.8	7.8
	O2 ppm	9.3	10.1	10.1	10.4	10.4
	Cond.	170				168
	Temp(C)	15.0	15.0	15.0	15.0	15.0
56	pH	7.4	7.8	7.8	7.8	7.8
	O2 ppm	9.4	10.2	9.9	10.4	10.4
	Cond.	169				169
	Temp(C)	15.0	15.0	15.0	15.0	15.0
25	pH	7.4	7.7	7.7	7.8	7.7
	O2 ppm	9.6	9.9	9.9	10.3	10.3
	Cond.	166				166
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.4	7.8	7.7	7.8	7.7
	O2 ppm	9.5	10.1	9.9	10.4	10.2
	Cond.	165				167
	Temp(C)	15.0	15.0	15.0	15.0	15.0
1	pH	7.3	7.8	7.7	7.8	7.7
	O2 ppm	9.5	10.0	10.0	10.1	10.0
	Cond.	168				179
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.2	7.6	7.7	7.7	7.8
	O2 ppm	9.9	10.0	9.5	9.5	9.9
	Cond.	165				165
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.2	7.8	7.8	7.8	7.9
	O2 ppm	9.8	10.2	9.8	10.2	10.2
	Cond.	165				162
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 05900034

TEST CONDITIONS

Company : BASF Canada Inc.
Sarnia, ONT
(740407)
Region : Southwest
Industry : Organic Chemical
Control point : OT cooling water, (200)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C. Ferguson
Date Collected : 02/13/90
Received : 02/13/90
Tested : 02/14/90 at: 1500
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
%	00:00	25:00	43:00	67:00	96:00	%
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments :

TOXICITY TEST PARAMETERS

Sample Number: 05900034

TEST CONC. %	E L A P S E D T I M E				
	00:00	25:00	43:00	67:00	96:00

100	pH	7.6			7.7
	O2 ppm	9.2			8.6
	Cond.	185			191
	Temp(C)	15.0			15.0
Control	pH	7.6			7.7
	O2 ppm	10.0			9.6
	Cond.	158			175
	Temp(C)	15.0			15.0
Control	pH	7.6			7.7
	O2 ppm	10.2			9.6
	Cond.	160			175
	Temp(C)	15.0			15.0

TOXICITY TEST REPORT

Sample: 05890106

TEST CONDITIONS

Company : BASF Canada Inc.
Sarnia, ONT
(740407)
Region : Southwest
Industry : Organic Chemical
Control point : intake water, (500)
Laboratory : Pollutech
Sampling Method : grab
Sampled By : C. Ferguson
Date Collected : 11/15/89
Received : 11/15/89
Tested : 11/16/89 at: 1230
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	22:10	49:00	72:10	97:10	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 05890106

TEST CONC. %	ELAPSED TIME				
	00:00	22:10	49:00	72:10	97:10
100	pH	7.9	7.8	7.8	7.8
	O2 ppm	10.6	10.4	10.2	10.6
	Cond.	162			162
	Temp(C)	15.0	15.0	15.0	15.0
100	pH	7.9	7.9	7.9	7.9
	O2 ppm	10.6	10.5	10.2	10.5
	Cond.	162			162
	Temp(C)	15.0	15.0	15.0	15.0
Control	pH	7.2	7.6	7.7	7.8
	O2 ppm	9.9	10.0	9.5	9.9
	Cond.	165			165
	Temp(C)	15.0	15.0	15.0	15.0
Control	pH	7.2	7.8	7.8	7.9
	O2 ppm	9.8	10.2	9.8	10.2
	Cond.	165			162
	Temp(C)	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 05900031

TEST CONDITIONS

Company : BASF Canada Inc.
Sarnia, ONT
(740407)
Region : Southwest
Industry : Organic Chemical

Control point : intake water, (500)

Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C. Ferguson
Date Collected : 02/13/90
Received : 02/13/90
Tested : 02/14/90 at: 1500

Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
	%	00:00	25:00	43:00	67:00	
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900031

TEST CONC. %	E L A P S E D T I M E				
	00:00	25:00	43:00	67:00	96:00

100	pH	9.3	7.8
	O2 ppm	10.3	9.3
	Cond.	175	178
	Temp(C)	15.0	15.0
100	pH	7.9	7.9
	O2 ppm	10.4	9.4
	Cond.	168	175
	Temp(C)	15.0	15.0
Control	pH	7.6	7.7
	O2 ppm	10.0	9.6
	Cond.	158	175
	Temp(C)	15.0	15.0
Control	pH	7.6	7.7
	O2 ppm	10.2	9.6
	Cond.	160	175
	Temp(C)	15.0	15.0

COMPANY: BASF Canada Inc., Sarnia
(740407)
SECTOR: Organic Chemical
REGION: Southwest

SUMMARY

Data for six *Daphnia magna* acute lethality toxicity tests conducted on samples of intake water and once through cooling water (outfalls #100 and 200) collected between October 1989 and March 1990 have been submitted by BASF Canada Inc. of Sarnia. Samples from the intake water and once through cooling water #100 were all not acutely lethal to *Daphnia*. One sample from once through cooling water #200 was nonlethal and the other sample had an LC50 greater than 100%.

OT cooling water

05890108 sampled: 11/15/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900033 sampled: 02/13/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

OT cooling water

05890107 sampled: 11/15/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900034 sampled: 02/13/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

rain gauge

intake water

05890106 sampled: 11/15/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900031 sampled: 02/13/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

BASF Canada Inc. (continued)

TOXICITY TEST REPORT

Sample: 05890108

TEST CONDITIONS

Company : BASF Canada Inc.
Sarnia, ONT
(740407)
Region : Southwest
Industry : Organic Chemical
Control point : OT cooling water, (100)
Laboratory : Pollutech
Sampling Method : grab
Sampled By : C. Ferguson
Date Collected : 11/15/89
Received : 11/15/89
Tested : 11/15/89 at: 1140
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00	48:00	%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 05890108

TEST CONC.	ELAPSED TIME	
%	00:00	48:00

100	pH	7.9	7.9
	O2 ppm	9.6	8.9
	Cond.	200	200
	Temp(C)	20.0	20.0
50	pH	8.0	8.0
	O2 ppm	9.3	8.9
	Cond.	358	352
	Temp(C)	20.0	20.0
26	pH	8.1	8.1
	O2 ppm	9.2	8.9
	Cond.	430	420
	Temp(C)	20.0	20.0
13	pH	8.1	8.1
	O2 ppm	9.2	8.9
	Cond.	460	452
	Temp(C)	20.0	20.0
6	pH	8.1	8.1
	O2 ppm	9.0	8.9
	Cond.	480	472
	Temp(C)	20.0	20.0
Control	pH	8.1	8.1
	O2 ppm	9.6	8.9
	Cond.	492	490
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05900033

TEST CONDITIONS

Company : BASF Canada Inc.
Sarnia, ONT
(740407)
Region : Southwest
Industry : Organic Chemical
Control point : OT cooling water, (100)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C.Ferguson
Date Collected : 02/13/90
Received : 02/13/90
Tested : 02/13/90 at: 1135
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00 48:20		%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900033

TEST CONC.	ELAPSED TIME	
%	00:00 48:20	

100	pH	8.0	7.9
	O2 ppm	9.4	9.2
	Cond.	196	208
	Temp(C)	20.0	20.0
50	pH	8.2	8.1
	O2 ppm	9.0	9.2
	Cond.	350	355
	Temp(C)	20.0	20.0
26	pH	8.2	8.2
	O2 ppm	8.8	9.2
	Cond.	420	422
	Temp(C)	20.0	20.0
13	pH	8.3	8.2
	O2 ppm	8.9	9.2
	Cond.	452	456
	Temp(C)	20.0	20.0
6	pH	8.3	8.2
	O2 ppm	9.0	9.2
	Cond.	470	480
	Temp(C)	20.0	20.0
Control	pH	8.4	8.2
	O2 ppm	9.0	9.1
	Cond.	482	490
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05890107

TEST CONDITIONS

Company : BASF Canada Inc.
 Sarnia, ONT
 (740407)
 Region : Southwest
 Industry : Organic Chemical
 Control point : OT cooling water, (200)
 Laboratory : Pollutech
 Sampling Method : grab
 Sampled By : C. Ferguson
 Date Collected : 11/15/89
 Received : 11/15/89
 Tested : 11/15/89 at: 1105

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00	48:10	%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal
 95% fid. limits : 0.0 - 0.0 %
 Comments :

SLOPE of Mortality Curve :
 LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 05890107

TEST CONC.	ELAPSED TIME	
%	00:00	48:10

100	pH	7.9	7.9
	O2 ppm	8.3	8.6
	Cond.	204	200
	Temp(C)	20.0	20.0
50	pH	7.9	8.1
	O2 ppm	8.7	8.7
	Cond.	364	360
	Temp(C)	20.0	20.0
26	pH	8.0	8.2
	O2 ppm	8.9	8.8
	Cond.	432	422
	Temp(C)	20.0	20.0
13	pH	8.1	8.2
	O2 ppm	9.0	8.8
	Cond.	466	454
	Temp(C)	20.0	20.0
6	pH	8.1	8.2
	O2 ppm	9.0	8.8
	Cond.	482	474
	Temp(C)	20.0	20.0
Control	pH	8.1	8.2
	O2 ppm	9.6	8.9
	Cond.	492	482
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05900034

TEST CONDITIONS

Company : BASF Canada Inc.
 Sarnia, ONT
 (740407)
 Region : Southwest
 Industry : Organic Chemical
 Control point : OT cooling water, (200)
 Laboratory : Pollutech
 Sampling Method : Grab
 Sampled By : C.Ferguson
 Date Collected : 02/13/90
 Received : 02/13/90
 Tested : 02/13/90 at: 1200
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00	48:00	%
100	0	1	8
50	0	0	0
26	0	0	0
13	0	1	8
6	0	0	0
Control	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900034

TEST CONC. %	ELAPSED TIME	
	00:00	48:00

100	pH	7.9	7.9
	O2 ppm	9.6	9.0
	Cond.	212	225
	Temp(C)	20.0	20.0
50	pH	8.2	8.1
	O2 ppm	9.0	9.1
	Cond.	358	360
	Temp(C)	20.0	20.0
26	pH	8.3	8.2
	O2 ppm	8.8	9.2
	Cond.	422	430
	Temp(C)	20.0	20.0
13	pH	8.4	8.2
	O2 ppm	8.8	9.0
	Cond.	458	465
	Temp(C)	20.0	20.0
6	pH	8.4	8.2
	O2 ppm	8.7	9.1
	Cond.	470	481
	Temp(C)	20.0	20.0
Control	pH	8.4	8.2
	O2 ppm	8.8	9.0
	Cond.	482	490
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05890106

TEST CONDITIONS

Company : BASF Canada Inc.
Sarnia, ONT
(740407)
Region : Southwest
Industry : Organic Chemical
Control point : intake water, (500)
Laboratory : Pollutech
Sampling Method : grab
Sampled By : C. Ferguson
Date Collected : 11/15/89
Received : 11/15/89
Tested : 11/15/89 at: 1120
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00	48:05	%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 05890106

TEST CONC. %	ELAPSED TIME
	00:00 48:05

100	pH	7.8	8.0
	O2 ppm	9.2	9.0
	Cond.	198	200
	Temp(C)	20.0	20.0
50	pH	7.9	8.1
	O2 ppm	9.6	9.0
	Cond.	358	352
	Temp(C)	20.0	20.0
26	pH	8.0	8.1
	O2 ppm	9.6	9.0
	Cond.	428	412
	Temp(C)	20.0	20.0
13	pH	8.0	8.1
	O2 ppm	9.6	9.0
	Cond.	460	452
	Temp(C)	20.0	20.0
6	pH	8.0	8.1
	O2 ppm	9.4	9.0
	Cond.	482	470
	Temp(C)	20.0	20.0
Control	pH	8.0	8.1
	O2 ppm	9.6	9.2
	Cond.	492	488
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05900031

TEST CONDITIONS

Company : BASF Canada Inc.
Sarnia, ONT
(740407)
Region : Southwest
Industry : Organic Chemical

Control point : intake water, (500)

Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C.Ferguson
Date Collected : 02/13/90
Received : 02/13/90
Tested : 02/13/90 at: 1150

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00	48:00	%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900031

TEST CONC. %	ELAPSED TIME	
	00:00	48:00

100	pH	8.0	7.8
	O2 ppm	10.2	9.0
	Cond.	196	205
	Temp(C)	20.0	20.0
50	pH	8.2	8.0
	O2 ppm	9.4	9.2
	Cond.	350	355
	Temp(C)	20.0	20.0
26	pH	8.3	8.2
	O2 ppm	9.2	9.2
	Cond.	420	422
	Temp(C)	20.0	20.0
13	pH	8.3	8.2
	O2 ppm	9.3	9.1
	Cond.	452	459
	Temp(C)	20.0	20.0
6	pH	8.3	8.2
	O2 ppm	9.3	9.2
	Cond.	470	472
	Temp(C)	20.0	20.0
Control	pH	8.3	8.2
	O2 ppm	9.3	9.2
	Cond.	482	490
	Temp(C)	20.0	20.0

COMPANY: BASF Fibres Inc., Arnprior
(740209)
SECTOR: Organic Chemical
REGION: Southeast

SUMMARY

Acute toxicity monitoring requirement for BASF Fibres Incorporated was initiated July 31, 1990 therefore no acute toxicity results have been submitted for the period between October 1989 and March 1990.

COMPANY: BASF Fibres Inc., Arnprior
(740209)
SECTOR: Organic Chemical
REGION: Southeast

SUMMARY

Toxicity monitoring for BASF Fibres Inc. of Arnprior was initiated on July 31, 1990 therefore no data for samples have been submitted for the period October 1989 to March 1990.

COMPANY: BTL Specialty Resins, Bellville
(1860006)
(now with Bellville Plant)
SECTOR: Organic Chemical
REGION: Southeast

SUMMARY

The data for twelve trout bioassays, conducted on combined effluent samples collected between October 1989 and March 1990, were provided by BTL Specialty Resins. All six samples collected from the combined effluent discharge, control point 0100, were determined to have been non-acutely lethal to test fish. One sample from the combined effluent discharge, control point 0200, had a 96 hour LC50 > 100 %, while the remaining five samples from this source were determined to have been non-acutely lethal. An audit sample collected in January from control point 0100 was tested by O.M.E. laboratory and was determined to have been non-acutely lethal. An audit sample collected in January from control point 0200 had a 96 hour LC50 > 100 %. BTL ceased operation on March 31, 1990 and site decommissioning is currently underway.

combined effluent

03890214	sampled: 10/10/89	non-lethal
95% fid. limits:	0.0 -	0.0 %
comments:	Non lethal	
03890252	sampled: 11/08/89	non-lethal
95% fid. limits:	0.0 -	0.0 %
comments:	Non-lethal	
03890353	sampled: 12/12/89	non-lethal
95% fid. limits:	0.0 -	0.0 %
comments:	Non-lethal	
03900023	sampled: 01/09/90	non-lethal
95% fid. limits:	0.0 -	0.0 %
comments:	Non-lethal	
01900007	sampled: 01/23/90	non-lethal
95% fid. limits:	0.0 -	0.0 %
comments:	MISA audit sample.	
03900100	sampled: 02/06/90	non-lethal
95% fid. limits:	0.0 -	0.0 %
comments:	Single Concentration Test	
03900202	sampled: 03/13/90	non-lethal
95% fid. limits:	0.0 -	0.0 %
comments:	Single concentration test; non-lethal	

BTL Specialty Resins (continued)

combined effluent

03890215 sampled: 10/10/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03890251 sampled: 11/08/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03890354 sampled: 12/12/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900024 sampled: 01/09/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

01900008 sampled: 01/23/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: MISA audit sample.

03900101 sampled: 02/06/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test

03900203 sampled: 03/13/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single concentration test; non-lethal

rain gauge

intake water

TOXICITY TEST REPORT

Sample: 03890214

TEST CONDITIONS

Company : BTL Specialty Resins
Bellville, ONT
(1860006)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (100)
Laboratory : BAR
Sampling Method : Grab
Sampled By : J Mirka
Date Collected : 10/10/89
Received : 10/12/89
Tested : 10/13/89 at: 1300
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890214

TEST CONC. %	ELAPSED TIME					
	00:00	04:00	24:00	48:00	72:00	96:00

Control	pH	7.8					8.4
	O2 ppm	7.1					8.8
	Cond.	567					566
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0
10	pH	7.8					8.4
	O2 ppm	7.9					8.8
	Cond.	547					542
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0
20	pH	7.7					8.5
	O2 ppm	7.2					9.2
	Cond.	525					530
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0
40	pH	7.7					8.4
	O2 ppm	7.6					8.5
	Cond.	480					487
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0
65	pH	7.8					8.2
	O2 ppm	8.4					8.4
	Cond.	423					433
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0
100	pH	8.0					8.2
	O2 ppm	8.9					8.9
	Cond.	344					354
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 03890252

TEST CONDITIONS

Company : BTL Specialty Resins
 Bellville, ONT
 (1860006)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M.J.
 Date Collected : 11/08/89
 Received : 11/09/89
 Tested : 11/09/89 at: 1330
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E						TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890252

TEST CONC. %	E L A P S E D T I M E					
	00:00	04:00	24:00	48:00	72:00	96:00
Control	pH 7.7 O2 ppm 8.5 Cond. 562 Temp(C) 15.0	15.0	15.0	15.0	15.0	8.4 9.3 543 14.0
10	pH 7.7 O2 ppm 8.6 Cond. 543 Temp(C) 15.0	15.0	15.0	15.0	15.0	8.0 8.2 537 14.0
20	pH 7.6 O2 ppm 8.6 Cond. 527 Temp(C) 15.0	15.0	15.0	15.0	15.0	8.0 7.9 524 14.0
40	pH 7.7 O2 ppm 8.8 Cond. 499 Temp(C) 15.0	15.0	15.0	15.0	15.0	7.9 7.6 494 14.0
65	pH 7.7 O2 ppm 9.5 Cond. 462 Temp(C) 15.0	15.0	15.0	15.0	15.0	8.2 9.2 451 14.0
100	pH 7.7 O2 ppm 9.6 Cond. 399 Temp(C) 15.0	15.0	15.0	15.0	15.0	8.1 8.9 410 14.0

TOXICITY TEST REPORT

Sample: 03890353

TEST CONDITIONS

Company : BTL Specialty Resins
 Bellville, ONT
 (1860006)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M.J.
 Date Collected : 12/12/89
 Received : 12/14/89
 Tested : 12/17/89 at: 900
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890353

TEST CONC. %	ELAPSED TIME				
	00:00	24:00	48:00	72:00	96:00
100	pH 8.0				8.2
	O2 ppm 9.4				9.9
	Cond. 284				291
	Temp(C) 15.0	14.0	14.0	14.0	14.0
65	pH 8.0				8.3
	O2 ppm 9.2				9.9
	Cond. 385				390
	Temp(C) 15.0	14.0	14.0	14.0	14.0
40	pH 7.9				8.3
	O2 ppm 9.0				9.5
	Cond. 453				464
	Temp(C) 15.0	14.0	14.0	14.0	14.0
20	pH 7.9				8.5
	O2 ppm 8.9				9.9
	Cond. 507				514
	Temp(C) 15.0	14.0	14.0	14.0	14.0
10	pH 7.9				8.5
	O2 ppm 8.6				9.9
	Cond. 533				522
	Temp(C) 15.0	14.0	14.0	14.0	14.0
5	pH 7.9				8.5
	O2 ppm 8.1				9.8
	Cond. 542				534
	Temp(C) 15.0	14.0	14.0	14.0	14.0
Control	pH 7.8				8.5
	O2 ppm 8.7				9.8
	Cond. 534				553
	Temp(C) 15.0	14.0	14.0	14.0	14.0

TOXICITY TEST REPORT

Sample: 03900023

TEST CONDITIONS

Company : BTL Specialty Resins
 Bellville, ONT
 (1860006)
 Region : Southeast
 Industry : Organic Chemical

Control point : combined effluent, (100)

Laboratory : BAR
 Sampling Method : Grab
 Sampled By : Mirka J.
 Date Collected : 01/09/90
 Received : 01/11/90
 Tested : 01/12/90 at: 1100

Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900023

TEST CONC. %	E L A P S E D T I M E				
	00:00	24:00	48:00	72:00	96:00

100	pH	7.7			7.9
	O2 ppm	9.7			8.7
	Cond.	410			419
	Temp(C)	15.0	15.0	15.0	15.0
Control	pH	7.9			8.4
	O2 ppm	8.9			9.1
	Cond.	553			564
	Temp(C)	15.0	15.0	15.0	15.0

MISA Trout

TOXICITY TEST REPORT

Sample: 01900007

TEST CONDITIONS

Company : BTL Specialty Resins
Bellville, ONT
(1860006)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (100)
Laboratory : MOE
Sampling Method : grab
Sampled By : Brad Eckert
Date Collected : 01/23/90
Received : 01/24/90
Tested : 01/26/90 at: 1500
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E										TOTAL MORTALITY
	%	00:00	00:30	01:00	02:00	04:00	20:30	46:00	68:30	96:00	%
100	0	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA audit sample.

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01900007

TEST CONC. %	E L A P S E D T I M E									
		00:00	00:30	01:00	02:00	04:00	20:30	46:00	68:30	96:00
100	pH	7.0		7.3			7.5	7.4	7.4	7.
	O2 ppm	9.4		9.1			9.8	9.5	9.4	9.
	Cond.	255		265			260	265	270	26
	Temp(C)	15.0		15.0			14.0	14.0	14.0	14.
65	pH			7.3			7.4	7.4	7.4	7.
	O2 ppm			9.5			9.8	9.4	9.7	9.
	Cond.			270			265	270	275	27
	Temp(C)			15.0			14.0	14.0	14.0	14.
40	pH			7.3			7.4	7.3	7.4	7.
	O2 ppm			9.5			9.8	9.5	9.6	9.
	Cond.			275			270	275	280	27
	Temp(C)			15.0			14.0	14.0	14.0	14.
30	pH			7.3			7.3	7.2	7.3	7.
	O2 ppm			9.4			9.7	9.3	9.5	9.
	Cond.			275			265	280	280	28
	Temp(C)			15.0			14.0	14.0	14.0	14.
20	pH			7.2			7.1	7.0	7.1	7.
	O2 ppm			9.2			9.2	9.3	9.0	8.
	Cond.			280			265	285	275	28
	Temp(C)			15.0			14.0	14.0	14.0	14.
10	pH			7.2			7.1	7.0	7.1	7.
	O2 ppm			9.3			9.7	9.4	9.4	9.
	Cond.			280			275	285	275	28
	Temp(C)			15.0			14.0	14.0	14.0	14.
Control	pH			7.2			7.0	7.0	7.0	7.
	O2 ppm			9.4			10.0	9.4	9.7	9.
	Cond.			280			280	285	280	27
	Temp(C)			15.0			14.0	14.0	14.0	14.

TOXICITY TEST REPORT

Sample: 03900100

TEST CONDITIONS

Company : BTL Specialty Resins
Bellville, ONT
(1860006)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (100)
Laboratory : BAR
Sampling Method : Grab
Sampled By : Mirka J.
Date Collected : 02/06/90
Received : 02/08/90
Tested : 02/08/90 at: 1530
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
	%	00:00	24:00	48:00	72:00	
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test

TOXICITY TEST PARAMETERS

Sample Number: 03900100

TEST CONC. %		ELAPSED TIME				
		00:00	24:00	48:00	72:00	96:00
100	pH	7.9				8.2
	O2 ppm	8.4				9.5
	Cond.	303				311
	Temp(C)	15.0	15.0	15.0	14.0	15.0
100	pH	7.9				8.2
	O2 ppm	8.4				9.4
	Cond.	303				314
	Temp(C)	15.0	15.0	15.0	14.0	15.0
Control	pH	7.8				8.4
	O2 ppm	7.7				9.2
	Cond.	535				542
	Temp(C)	15.0	15.0	15.0	14.0	15.0
Control	pH	7.8				8.5
	O2 ppm	7.7				9.5
	Cond.	535				520
	Temp(C)	15.0	15.0	15.0	14.0	15.0

MISA Trout

TOXICITY TEST REPORT

Sample: 03900202

TEST CONDITIONS

Company : BTL Specialty Resins
 Bellville, ONT
 (1860006)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : Mirka J.
 Date Collected : 03/13/90
 Received : 03/15/90
 Tested : 03/15/90 at: 1505

Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
	%	00:00	24:00	48:00	72:00	
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single concentration test; non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900202

TEST CONC. %		E L A P S E D T I M E				
		00:00	24:00	48:00	72:00	96:00
100	pH	7.9				8.2
	O2 ppm	10.2				9.5
	Cond.	375				373
	Temp(C)	16.0	15.0	16.0	15.5	16.0
100	pH	7.9				8.0
	O2 ppm	10.2				8.8
	Cond.	375				375
	Temp(C)	16.0	15.0	16.0	15.5	16.0
Control	pH	7.9				8.5
	O2 ppm	9.1				9.4
	Cond.	588				542
	Temp(C)	16.0	15.0	16.0	15.5	16.0
Control	pH	7.9				8.4
	O2 ppm	9.1				9.0
	Cond.	588				546
	Temp(C)	16.0	15.0	16.0	15.5	16.0

TOXICITY TEST REPORT

Sample: 03890215

TEST CONDITIONS

Company : BTL Specialty Resins
Bellville, ONT
(1860006)
Region : Southeast
Industry : Organic Chemical

Control point : combined effluent, (200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : J. Mirka
Date Collected : 10/10/89
Received : 10/12/89
Tested : 10/13/89 at: 1300

Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890215

TEST CONC. %	ELAPSED TIME					
	00:00	04:00	24:00	48:00	72:00	96:00

Control	pH	7.8					8.4
	O2 ppm	7.1					8.9
	Cond.	567					565
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0
10	pH	7.8					8.5
	O2 ppm	8.0					9.1
	Cond.	544					541
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0
20	pH	7.8					8.4
	O2 ppm	7.7					8.9
	Cond.	522					523
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0
40	pH	7.9					8.4
	O2 ppm	8.3					9.2
	Cond.	475					476
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0
65	pH	7.9					8.3
	O2 ppm	8.4					9.0
	Cond.	414					420
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0
100	pH	7.7					8.0
	O2 ppm	8.8					8.3
	Cond.	330					336
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 03890251

TEST CONDITIONS

Company : BTL Specialty Resins
 Bellville, ONT
 (1860006)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (200)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M.J.
 Date Collected : 11/08/89
 Received : 11/09/89
 Tested : 11/09/89 at: 1330
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E						TOTAL MORTALITY
	%	00:00	04:00	24:00	48:00	72:00	96:00
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890251

TEST CONC. %	E L A P S E D T I M E					
	00:00	04:00	24:00	48:00	72:00	96:00

Control	pH	7.7					8.4
	O2 ppm	8.7					9.2
	Cond.	561					529
	Temp(C)	15.0	15.0	15.0	15.0	15.0	14.0
10	pH	7.7					8.1
	O2 ppm	8.7					8.2
	Cond.	538					539
	Temp(C)	15.0	15.0	15.0	15.0	15.0	14.0
20	pH	7.7					8.2
	O2 ppm	8.7					9.1
	Cond.	514					515
	Temp(C)	15.0	15.0	15.0	15.0	15.0	14.0
40	pH	7.7					7.8
	O2 ppm	8.7					7.2
	Cond.	471					471
	Temp(C)	15.0	15.0	15.0	15.0	15.0	14.0
65	pH	7.6					8.1
	O2 ppm	9.1					9.1
	Cond.	403					407
	Temp(C)	15.0	15.0	15.0	15.0	15.0	14.0
100	pH	7.5					7.7
	O2 ppm	9.4					8.2
	Cond.	315					323
	Temp(C)	15.0	15.0	15.0	15.0	15.0	14.0

TOXICITY TEST REPORT

Sample: 03890354

TEST CONDITIONS

Company : BTL Specialty Resins
 Bellville, ONT
 (1860006)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (200)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M.J.
 Date Collected : 12/12/89
 Received : 12/14/89
 Tested : 12/17/89 at: 915
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890354

TEST ELAPSED TIME
 CONC. % 00:00 24:00 48:00 72:00 96:00

100	pH	7.8				8.2
	O2 ppm	9.4				9.8
	Cond.	308				315
	Temp(C)	15.0	14.0	14.0	14.0	14.0
65	pH	7.8				8.4
	O2 ppm	9.2				9.7
	Cond.	391				396
	Temp(C)	15.0	14.0	14.0	14.0	14.0
40	pH	7.9				8.4
	O2 ppm	8.8				9.7
	Cond.	454				456
	Temp(C)	15.0	14.0	14.0	14.0	14.0
20	pH	7.9				8.2
	O2 ppm	8.9				9.4
	Cond.	502				504
	Temp(C)	15.0	14.0	14.0	14.0	14.0
10	pH	7.9				8.5
	O2 ppm	8.8				9.7
	Cond.	532				536
	Temp(C)	15.0	14.0	14.0	14.0	14.0
5	pH	7.9				8.5
	O2 ppm	8.6				9.6
	Cond.	545				545
	Temp(C)	15.0	14.0	14.0	14.0	14.0
Control	pH	7.8				8.4
	O2 ppm	8.7				9.3
	Cond.	555				561
	Temp(C)	15.0	14.0	14.0	14.0	14.0

MISA Trout

TOXICITY TEST REPORT

Sample: 03900024

TEST CONDITIONS

Company : BTL Specialty Resins
Bellville, ONT
(1860006)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (200)
Laboratory : BAR
Sampling Method : Grab
Sampled By : Mirka J.
Date Collected : 01/09/90
Received : 01/11/90
Tested : 01/12/90 at: 1100
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY	
	%	00:00	24:00	48:00	72:00		96:00
100	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900024

TEST CONC. %	E L A P S E D T I M E				
	00:00	24:00	48:00	72:00	96:00

100	pH	7.6				7.9
	O2 ppm	9.7				8.3
	Cond.	317				308
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.9				8.4
	O2 ppm	8.5				9.1
	Cond.	562				566
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 01900008

TEST CONDITIONS

Company : BTL Specialty Resins
Bellville, ONT
(1860006)
Region : Southeast
Industry : Organic Chemical

Control point : combined effluent, (200)

Laboratory : MOE
Sampling Method : grab
Sampled By : Brad Eckert
Date Collected : 01/23/90
Received : 01/24/90
Tested : 01/26/90 at: 1500

Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E										TOTAL MORTALITY	
	%	00:00	00:30	01:00	02:00	04:00	21:00	46:00	68:15	96:00	%	%
100	0	0	0	0	0	0	0	0	0	1	10	
65	0	0	0	0	0	0	0	0	0	0	0	
40	0	0	0	0	0	0	0	0	0	0	0	
30	0	0	0	0	0	0	0	0	0	0	0	
20	0	0	0	0	0	0	0	0	0	0	0	
10	0	0	0	0	0	0	0	0	0	0	0	
Control	0	0	0	0	0	0	0	0	0	0	0	

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : MISA audit sample.

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01900008

TEST CONC. %	E L A P S E D T I M E									
		00:00	00:30	01:00	02:00	04:00	21:00	46:00	68:15	96:00
100	pH	7.0		7.3			7.4	7.4	7.4	7.
	O2 ppm	9.3		9.3			9.6	9.5	9.5	9.
	Cond.	235		240			240	245	250	24
	Temp(C)	15.0		15.0			14.0	14.0	14.0	14.
65	pH			7.4			7.4	7.4	7.3	7.
	O2 ppm			9.5			9.6	9.4	9.6	9.
	Cond.			255			255	260	260	26
	Temp(C)			15.0			14.0	14.0	14.0	14.
40	pH			7.3			7.3	7.3	7.2	7.
	O2 ppm			9.1			9.6	9.5	9.5	9.
	Cond.			265			265	270	270	27
	Temp(C)			15.0			14.0	14.0	14.0	14.
30	pH			7.4			7.2	7.2	7.1	7.
	O2 ppm			9.3			9.6	9.5	9.7	9.
	Cond.			270			265	280	275	27
	Temp(C)			15.0			14.0	14.0	14.0	14.
20	pH			7.3			7.1	7.1	7.0	7.
	O2 ppm			9.2			9.5	9.3	9.4	9.
	Cond.			275			270	280	280	28
	Temp(C)			15.0			14.0	14.0	14.0	14.
10	pH			7.3			7.1	7.0	7.0	7.
	O2 ppm			9.3			9.6	9.3	9.5	9.
	Cond.			275			275	280	285	28
	Temp(C)			15.0			14.0	14.0	14.0	14.
Control	pH			7.2			7.0	7.0	7.0	7.
	O2 ppm			9.2			9.3	9.2	9.4	9.
	Cond.			275			265	275	285	28
	Temp(C)			15.0			14.0	14.0	14.0	14.

MISA Trout

TOXICITY TEST REPORT

Sample: 03900101

TEST CONDITIONS

Company : BTL Specialty Resins
 Bellville, ONT
 (1860006)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (200)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : Mirka J.
 Date Collected : 02/06/90
 Received : 02/08/90
 Tested : 02/08/90 at: 1530
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	1	10
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900101

TEST CONC. %	ELAPSED TIME					
	00:00	24:00	48:00	72:00	96:00	
100	pH	7.7			8.2	
	O2 ppm	8.4			9.5	
	Cond.	311			319	
	Temp(C)	15.0	15.0	15.0	14.0	15.0
100	pH	7.7			8.1	
	O2 ppm	8.4			9.2	
	Cond.	311			322	
	Temp(C)	15.0	15.0	15.0	14.0	15.0
Control	pH	7.8			8.5	
	O2 ppm	7.7			9.7	
	Cond.	535			519	
	Temp(C)	15.0	15.0	15.0	14.0	15.0
Control	pH	7.8			8.5	
	O2 ppm	7.7			9.5	
	Cond.	535			535	
	Temp(C)	15.0	15.0	15.0	14.0	15.0

TOXICITY TEST REPORT

Sample: 03900203

TEST CONDITIONS

Company : BTL Specialty Resins
Bellville, ONT
(1860006)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (200)
Laboratory : BAR
Sampling Method : Grab
Sampled By : Mirka J.
Date Collected : 03/13/90
Received : 03/15/90
Tested : 03/15/90 at: 1510
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
	%	00:00	24:00	48:00	72:00	96:00
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single concentration test; non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900203

TEST CONC. %	E L A P S E D T I M E					
		00:00	24:00	48:00	72:00	96:00
100	pH	7.5				7.9
	O2 ppm	8.8				8.4
	Cond.	255				259
	Temp(C)	16.0	15.0	16.0	15.5	16.0
100	pH	7.5				8.0
	O2 ppm	8.8				8.8
	Cond.	255				269
	Temp(C)	16.0	15.0	16.0	15.5	16.0
Control	pH	7.9				8.3
	O2 ppm	9.2				8.7
	Cond.	549				545
	Temp(C)	16.0	15.0	16.0	15.5	16.0
Control	pH	7.9				8.2
	O2 ppm	9.2				8.7
	Cond.	549				547
	Temp(C)	16.0	15.0	16.0	15.5	16.0

COMPANY: BTL Specialty Resins, Bellville
(1860006)
(now with Bellville Plant)
SECTOR: Organic Chemical
REGION: Southeast

SUMMARY

Results from twelve *Daphnia magna* acute lethality toxicity tests conducted on samples of combined effluent (outfalls #100 and 200) collected between October 1989 and March 1990 were submitted by BTL Specialty Resins of Belleville. Three of six samples from combined effluent #100 were not acutely lethal to *Daphnia*. The remaining three samples had LC50 values greater than 100%. The sample collected in October had the greatest mortalities in the middle concentrations of effluent.

Three samples of combined effluent #200 were not acutely lethal to *Daphnia* and the remaining three samples had LC50 values greater than 100%.

One sample from each of these outfalls was tested in the Ministry laboratory in January. The sample from combined effluent #100 had one mortality in the 100% test solution, and the sample from combined effluent #200 was not acutely lethal to *Daphnia*.

BTL ceased operation on March 31, 1990 and site decommissioning is currently underway.

combined effluent

03890214	sampled: 10/10/89	LC50: >100 %
95% fid. limits:	0.0 -	0.0 %
comments:	LC50 >100%	
03890252	sampled: 11/08/89	LC50: >100 %
95% fid. limits:	0.0 -	0.0 %
comments:	Non-lethal	
03890353	sampled: 12/12/89	non-lethal
95% fid. limits:	0.0 -	0.0 %
comments:	Non-lethal	
03900023	sampled: 01/09/90	LC50: >100 %
95% fid. limits:	0.0 -	0.0 %
comments:	LC50 >100	
02900007	sampled: 01/23/90	LC50: >100 %
95% fid. limits:	0.0 -	0.0 %
comments:	MISA Audit	
03900100	sampled: 02/06/90	non-lethal
95% fid. limits:	0.0 -	0.0 %
comments:	Non-lethal	

BTL Specialty Resins (continued)

03900202 sampled: 03/13/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

combined effluent

03890215 sampled: 10/10/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03890251 sampled: 11/08/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03890354 sampled: 12/12/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900024 sampled: 01/09/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

02900008 sampled: 01/23/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

03900101 sampled: 02/06/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900203 sampled: 03/13/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

rain gauge

intake water

TOXICITY TEST REPORT

Sample: 03890214

TEST CONDITIONS

Company : BTL Specialty Resins
 Bellville, ONT
 (1860006)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : J. Mirka
 Date Collected : 10/10/89
 Received : 10/12/89
 Tested : 10/12/89 at: 1420
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	%
Control	0	0	0	0	0
6	0	0	0	2	16
13	0	0	0	2	16
25	0	0	1	1	8
50	0	0	1	2	16
100	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100%

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890214

TEST CONC.	ELAPSED TIME			
%	00:00	04:00	24:00	48:00

Control	pH	8.4			8.4
	O2 ppm	7.8			8.8
	Cond.	315			316
	Temp(C)	19.5	20.5	21.0	20.0
6	pH	8.2			8.3
	O2 ppm	8.0			8.7
	Cond.	319			322
	Temp(C)	19.5	20.5	21.0	20.0
13	pH	8.3			8.3
	O2 ppm	8.0			8.7
	Cond.	322			322
	Temp(C)	19.5	20.5	21.0	20.0
25	pH	8.3			8.3
	O2 ppm	8.1			8.7
	Cond.	325			325
	Temp(C)	19.5	20.5	21.0	20.0
50	pH	8.2			8.2
	O2 ppm	8.2			8.7
	Cond.	331			328
	Temp(C)	19.5	20.5	21.0	20.0
100	pH	7.9			8.2
	O2 ppm	8.3			8.7
	Cond.	340			337
	Temp(C)	19.5	20.5	21.0	20.0

TOXICITY TEST REPORT

Sample: 03890252

TEST CONDITIONS

Company : BTL Specialty Resins
 Bellville, ONT
 (1860006)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M.J.
 Date Collected : 11/08/89
 Received : 11/09/89
 Tested : 11/09/89 at: 1330
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E				TOTAL MORTALITY %
	%	00:00	04:00	24:00	48:00
Control	0	0	0	0	0
6	0	0	0	0	0
13	0	0	0	0	0
25	0	0	0	0	0
50	0	0	0	0	0
100	0	1	1	1	8

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890252

TEST CONC. %	E L A P S E D T I M E			
	00:00	04:00	24:00	48:00

Control	pH	8.4			8.4
	O2 ppm	8.9			9.2
	Cond.	304			306
	Temp(C)	20.0	20.0	20.5	20.0
6	pH	8.2			8.3
	O2 ppm	8.7			8.8
	Cond.	301			305
	Temp(C)	20.0	20.0	20.5	20.0
13	pH	8.3			8.3
	O2 ppm	8.7			8.8
	Cond.	313			315
	Temp(C)	20.0	20.0	20.5	20.0
25	pH	8.2			8.3
	O2 ppm	8.8			8.8
	Cond.	324			326
	Temp(C)	20.0	20.0	20.5	20.0
50	pH	7.9			8.2
	O2 ppm	8.9			8.8
	Cond.	344			347
	Temp(C)	20.0	20.0	20.5	20.0
100	pH	7.6			8.1
	O2 ppm	9.2			8.6
	Cond.	387			389
	Temp(C)	20.0	20.0	20.5	20.0

TOXICITY TEST REPORT

Sample: 03890353

TEST CONDITIONS

Company : BTL Specialty Resins
 Bellville, ONT
 (1860006)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M.J.
 Date Collected : 12/12/89
 Received : 12/14/89
 Tested : 12/14/89 at: 1645
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00 48:00	
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890353

TEST CONC. %	ELAPSED TIME		
	00:00	24:00	48:00

100	pH	7.9	8.2
	O2 ppm	9.7	8.5
	Cond.	281	283
	Temp(C)	20.0	19.5 19.0
50	pH	8.2	8.3
	O2 ppm	8.7	8.5
	Cond.	292	293
	Temp(C)	20.0	19.5 19.0
25	pH	8.3	8.4
	O2 ppm	8.5	8.5
	Cond.	298	298
	Temp(C)	20.0	19.5 19.0
13	pH	8.4	8.4
	O2 ppm	8.4	8.5
	Cond.	300	300
	Temp(C)	20.0	19.5 19.0
6	pH	8.4	8.4
	O2 ppm	8.4	8.6
	Cond.	298	301
	Temp(C)	20.0	19.5 19.0
Control	pH	8.4	8.4
	O2 ppm	8.7	8.2
	Cond.	297	295
	Temp(C)	20.0	19.5 19.0

TOXICITY TEST REPORT

Sample: 03900023

TEST CONDITIONS

Company : BTL Specialty Resins
Bellville, ONT
(1860006)
Region : Southeast
Industry : Organic Chemical

Control point : combined effluent, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : J. Mirka
Date Collected : 01/09/90
Received : 01/11/90
Tested : 01/12/90 at: 1045

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00 48:00	
100	0	1	1	8
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900023

TEST CONC. %	ELAPSED TIME		
	00:00	24:00	48:00

100	pH	7.9	8.2
	O2 ppm	9.1	8.7
	Cond.	406	412
	Temp(C)	20.0 20.0	20.0
50	pH	8.2	8.3
	O2 ppm	8.8	8.8
	Cond.	351	356
	Temp(C)	20.0 20.0	20.0
25	pH	8.4	8.4
	O2 ppm	8.8	8.8
	Cond.	324	328
	Temp(C)	20.0 20.0	20.0
13	pH	8.4	8.5
	O2 ppm	8.8	8.8
	Cond.	309	315
	Temp(C)	20.0 20.0	20.0
6	pH	8.5	8.5
	O2 ppm	8.8	8.8
	Cond.	299	308
	Temp(C)	20.0 20.0	20.0
Control	pH	8.6	8.5
	O2 ppm	8.8	8.6
	Cond.	298	302
	Temp(C)	20.0 20.0	20.0

TOXICITY TEST REPORT

Sample: 02900007

TEST CONDITIONS

Company : BTL Specialty Resins
 Bellville, ONT
 (1860006)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : MOE
 Sampling Method : Grab
 Sampled By : B. Eckert
 Date Collected : 01/23/90
 Received : 01/24/90
 Tested : 01/26/90 at: 1548
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
	%	00:00	01:00	23:00 48:00	
100	0	0	1	1	8
60	0	0	0	0	0
30	0	0	0	0	0
15	0	0	0	0	0
5	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
 LC50 Calculated By : None

TOXICITY TEST PARAMETERS

Sample Number: 02900007

TEST CONC. %	ELAPSED TIME			
	00:00	01:00	23:00	48:00

100	pH	7.7			8.0
	O2 ppm	9.0			7.9
	Cond.	322			315
	Temp(C)	20.0	20.0	20.0	20.0
60	pH	7.8			7.9
	O2 ppm	9.0			7.7
	Cond.	321			311
	Temp(C)	20.0	20.0	20.0	20.0
30	pH	8.0			7.8
	O2 ppm	8.9			7.5
	Cond.	318			309
	Temp(C)	20.0	20.0	20.0	20.0
15	pH	8.1			7.8
	O2 ppm	9.0			7.5
	Cond.	319			319
	Temp(C)	20.0	20.0	20.0	20.0
5	pH	8.2			7.7
	O2 ppm	9.0			7.4
	Cond.	317			310
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH	8.2			7.7
	O2 ppm	9.0			7.6
	Cond.	301			308
	Temp(C)	20.0	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 03900100

TEST CONDITIONS

Company : BTL Specialty Resins
 Bellville, ONT
 (1860006)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : Mirka J.
 Date Collected : 02/06/90
 Received : 02/08/90
 Tested : 02/08/90 at: 1150
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00	48:00
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900100

TEST CONC. %	ELAPSED TIME		
	00:00	24:00	48:00

100	pH	8.0	8.2
	O2 ppm	9.0	8.5
	Cond.	300	301
	Temp(C)	20.0	20.0
50	pH	8.3	8.4
	O2 ppm	8.8	8.4
	Cond.	300	299
	Temp(C)	20.0	20.0
25	pH	8.5	8.4
	O2 ppm	8.6	8.2
	Cond.	300	300
	Temp(C)	20.0	20.0
13	pH	8.5	8.4
	O2 ppm	8.6	8.0
	Cond.	300	298
	Temp(C)	20.0	20.0
6	pH	8.5	8.4
	O2 ppm	8.5	7.7
	Cond.	296	297
	Temp(C)	20.0	20.0
Control	pH	8.6	8.4
	O2 ppm	8.7	8.6
	Cond.	298	296
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 03900202

TEST CONDITIONS

Company : BTL Specialty Resins
Bellville, ONT
(1860006)
Region : Southeast
Industry : Organic Chemical

Control point : combined effluent, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : Mirka J.
Date Collected : 03/13/90
Received : 03/15/90
Tested : 03/15/90 at: 1215

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00 48:00	
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900202

TEST CONC. %	ELAPSED TIME		
	00:00	24:00	48:00

100	pH	7.8	8.0
	O2 ppm	8.8	8.8
	Cond.	372	367
	Temp(C)	20.5	20.0 20.0
50	pH	8.1	8.1
	O2 ppm	8.8	8.9
	Cond.	339	336
	Temp(C)	20.5	20.0 20.0
25	pH	8.2	8.2
	O2 ppm	8.7	8.9
	Cond.	324	319
	Temp(C)	20.5	20.0 20.0
13	pH	8.3	8.2
	O2 ppm	8.6	8.9
	Cond.	312	312
	Temp(C)	20.5	20.0 20.0
6	pH	8.3	8.2
	O2 ppm	8.6	8.9
	Cond.	309	306
	Temp(C)	20.5	20.0 20.0
Control	pH	8.5	8.3
	O2 ppm	8.6	8.7
	Cond.	305	307
	Temp(C)	20.5	20.0 20.0

TOXICITY TEST REPORT

Sample: 03890215

TEST CONDITIONS

Company : BTL Specialty Resins
 Bellville, ONT
 (1860006)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (200)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : J. Mirka
 Date Collected : 10/10/89
 Received : 10/12/89
 Tested : 10/12/89 at: 1435
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	%
Control	0	0	0	0	0
6	0	0	0	0	0
13	0	0	0	0	0
25	0	0	0	0	0
50	0	0	0	0	0
100	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

 SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890215

TEST CONC. %	ELAPSED TIME			
	00:00	04:00	24:00	48:00

Control	pH	8.4			8.4
	O2 ppm	7.8			8.9
	Cond.	315			317
	Temp(C)	19.5	20.5	21.0	20.0
6	pH	8.3			8.3
	O2 ppm	8.2			9.1
	Cond.	318			323
	Temp(C)	19.5	20.5	21.0	20.0
13	pH	8.2			8.3
	O2 ppm	8.2			9.1
	Cond.	320			320
	Temp(C)	19.5	20.5	21.0	20.0
25	pH	8.1			8.3
	O2 ppm	8.3			9.0
	Cond.	321			321
	Temp(C)	19.5	20.5	21.0	20.0
50	pH	7.9			8.2
	O2 ppm	8.3			8.9
	Cond.	322			322
	Temp(C)	19.5	20.5	21.0	20.0
100	pH	7.5			8.0
	O2 ppm	8.5			8.7
	Cond.	323			322
	Temp(C)	19.5	20.5	21.0	20.0

TOXICITY TEST REPORT

Sample: 03890251

TEST CONDITIONS

Company : BTL Specialty Resins
 Bellville, ONT
 (1860006)
 Region : Southeast
 Industry : Organic Chemical

Control point : combined effluent, (200)

Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M.J.
 Date Collected : 11/08/89
 Received : 11/09/89
 Tested : 11/09/89 at: 1320

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
	%	00:00	04:00	24:00 48:00	
Control	0	0	0	0	0
6	0	0	1	1	8
13	0	0	0	0	0
25	0	0	1	3	25
50	0	0	0	0	0
100	0	0	0	3	25

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890251

TEST CONC. %	ELAPSED TIME			
	00:00	04:00	24:00	48:00

Control	pH	8.4			8.3
	O2 ppm	8.9			9.2
	Cond.	304			309
	Temp(C)	20.0	20.0	20.5	20.0
6	pH	8.4			8.3
	O2 ppm	8.7			8.3
	Cond.	307			303
	Temp(C)	20.0	20.0	20.5	20.0
13	pH	8.2			8.3
	O2 ppm	8.7			8.7
	Cond.	306			306
	Temp(C)	20.0	20.0	20.5	20.0
25	pH	8.1			8.3
	O2 ppm	8.8			8.8
	Cond.	307			307
	Temp(C)	20.0	20.0	20.5	20.0
50	pH	7.8			8.1
	O2 ppm	8.8			8.8
	Cond.	307			308
	Temp(C)	20.0	20.0	20.5	20.0
100	pH	7.3			7.9
	O2 ppm	8.9			8.7
	Cond.	308			311
	Temp(C)	20.0	20.0	20.5	20.0

TOXICITY TEST REPORT

Sample: 03890354

TEST CONDITIONS

Company : BTL Specialty Resins
 Bellville, ONT
 (1860006)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (200)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M.J.
 Date Collected : 12/12/89
 Received : 12/14/89
 Tested : 12/14/89 at: 1525
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E			TOTAL MORTALITY
	%	00:00	24:00	48:00
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890354

TEST CONC.	E L A P S E D T I M E		
	%	00:00	24:00

100	pH	7.6		8.2
	O2 ppm	9.1		8.7
	Cond.	288		295
	Temp(C)	20.0	19.0	19.0
50	pH	8.0		8.3
	O2 ppm	8.7		8.7
	Cond.	293		295
	Temp(C)	20.0	19.0	19.0
25	pH	8.2		8.4
	O2 ppm	8.5		8.6
	Cond.	293		296
	Temp(C)	20.0	19.0	19.0
13	pH	8.3		8.4
	O2 ppm	8.4		8.5
	Cond.	295		297
	Temp(C)	20.0	19.0	19.0
6	pH	8.3		8.4
	O2 ppm	8.3		8.4
	Cond.	295		301
	Temp(C)	20.0	19.0	19.0
Control	pH	8.4		8.3
	O2 ppm	8.7		8.8
	Cond.	297		295
	Temp(C)	20.0	19.0	19.0

TOXICITY TEST REPORT

Sample: 03900024

TEST CONDITIONS

Company : BTL Specialty Resins
 Bellville, ONT
 (1860006)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (200)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : J. Mirka
 Date Collected : 01/09/90
 Received : 01/11/90
 Tested : 01/12/90 at: 1100
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E			TOTAL MORTALITY
	%	00:00	24:00	48:00
100	0	0	0	8
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900024

TEST CONC. %	E L A P S E D T I M E		
	00:00	24:00	48:00

100	pH	7.8	8.2
	O2 ppm	9.2	8.8
	Cond.	300	300
	Temp(C)	20.0	20.0
50	pH	8.2	8.3
	O2 ppm	8.9	8.9
	Cond.	297	301
	Temp(C)	20.0	20.0
25	pH	8.4	8.4
	O2 ppm	8.8	8.9
	Cond.	297	301
	Temp(C)	20.0	20.0
13	pH	8.5	8.4
	O2 ppm	8.8	8.9
	Cond.	296	301
	Temp(C)	20.0	20.0
6	pH	8.5	8.4
	O2 ppm	8.7	8.9
	Cond.	294	301
	Temp(C)	20.0	20.0
Control	pH	8.6	8.5
	O2 ppm	8.8	8.7
	Cond.	298	301
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 02900008

TEST CONDITIONS

Company : BTL Specialty Resins
 Bellville, ONT
 (1860006)
 Region : Southeast
 Industry : Organic Chemical

Control point : combined effluent, (200)

Laboratory : MOE
 Sampling Method : Grab
 Sampled By : B. Eckert
 Date Collected : 01/23/90
 Received : 01/24/90
 Tested : 01/26/90 at: 1357

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E				TOTAL MORTALITY
	%	00:00	01:00	24:00	48:00
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
15	0	0	0	0	0
5	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
 LC50 Calculated By : None

TOXICITY TEST PARAMETERS

Sample Number: 02900008

TEST E L A P S E D T I M E
 CONC. % 00:00 01:00 24:00 48:00

100	pH	7.3			7.9
	O2 ppm	8.9			7.9
	Cond.	293			282
	Temp(C)	20.0	20.0	20.0	20.0
60	pH	7.6			7.9
	O2 ppm	9.0			7.8
	Cond.	303			294
	Temp(C)	20.0	20.0	20.0	20.0
30	pH	7.9			7.9
	O2 ppm	9.0			7.9
	Cond.	309			302
	Temp(C)	20.0	20.0	20.0	20.0
15	pH	8.0			7.9
	O2 ppm	9.0			7.8
	Cond.	314			308
	Temp(C)	20.0	20.0	20.0	20.0
5	pH	8.1			7.9
	O2 ppm	9.1			7.8
	Cond.	316			311
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH	8.2			7.9
	O2 ppm	9.0			7.9
	Cond.	317			297
	Temp(C)	20.0	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 03900101

TEST CONDITIONS

Company : BTL Specialty Resins
 Bellville, ONT
 (1860006)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (200)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : Mirka J.
 Date Collected : 02/06/90
 Received : 02/08/90
 Tested : 02/08/90 at: 1200
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00 48:00	
100	0	0	0	0
50	0	0	1	8
25	0	1	1	8
13	0	1	1	8
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900101

TEST CONC. %	ELAPSED TIME		
	00:00	24:00	48:00

100	pH	7.6	8.1
	O2 ppm	8.8	8.4
	Cond.	308	310
	Temp(C)	20.0	20.0
50	pH	8.0	8.3
	O2 ppm	8.6	8.4
	Cond.	304	304
	Temp(C)	20.0	20.0
25	pH	8.3	8.4
	O2 ppm	8.6	8.5
	Cond.	303	302
	Temp(C)	20.0	20.0
13	pH	8.5	8.4
	O2 ppm	8.6	8.4
	Cond.	301	300
	Temp(C)	20.0	20.0
6	pH	8.5	8.4
	O2 ppm	8.5	8.5
	Cond.	300	301
	Temp(C)	20.0	20.0
Control	pH	8.6	8.4
	O2 ppm	8.7	8.5
	Cond.	298	297
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 03900203

TEST CONDITIONS

Company : BTL Specialty Resins
Bellville, ONT
(1860006)
Region : Southeast
Industry : Organic Chemical

Control point : combined effluent, (200)

Laboratory : BAR
Sampling Method : Grab
Sampled By : Mirka J.
Date Collected : 03/13/90
Received : 03/15/90
Tested : 03/15/90 at: 1155

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00 48:00	
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900203

TEST CONC.	ELAPSED TIME		
%	00:00	24:00	48:00

100	pH	7.5	7.7
	O2 ppm	8.5	8.4
	Cond.	253	255
	Temp(C)	21.0	20.0 20.0
50	pH	7.9	8.0
	O2 ppm	8.5	8.7
	Cond.	280	281
	Temp(C)	21.0	20.0 20.0
25	pH	8.2	8.1
	O2 ppm	8.5	8.8
	Cond.	292	293
	Temp(C)	21.0	20.0 20.0
13	pH	8.4	8.2
	O2 ppm	8.5	8.9
	Cond.	299	299
	Temp(C)	21.0	20.0 20.0
6	pH	8.5	8.2
	O2 ppm	8.6	8.9
	Cond.	300	302
	Temp(C)	21.0	20.0 20.0
Control	pH	8.5	8.3
	O2 ppm	8.6	8.7
	Cond.	305	304
	Temp(C)	21.0	20.0 20.0

COMPANY: Canadian Oxy Chemicals Ltd., Fort Erie
(1590009)
SECTOR: Organic Chemical
REGION: Southwest

SUMMARY

The data for two trout bioassays, conducted on two cooling water samples collected between October 1989 and March 1990, were provided by Canadian Oxy Chemicals Limited. One cooling water sample had a 96 hour LC50 > 100 %, while the second sample was determined to have been non-acutely lethal to test fish. An audit sample collected in November from the cooling water discharge was tested by O.M.E. laboratory and was determined to have been non-acutely lethal.

OT cooling water

03890310 sampled: 11/27/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100%

01890276 sampled: 11/29/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA audit sample.

03900110 sampled: 02/12/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test - Non Lethal

rain gauge

intake water

TOXICITY TEST REPORT

Sample: 03890310

TEST CONDITIONS

Company : Canadian Oxy Chemicals Ltd.
 Fort Erie, ONT
 (1590009)
 Region : Southwest
 Industry : Organic Chemical
 Control point : OT cooling water, (100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : T. Currah
 Date Collected : 11/27/89
 Received : 11/29/89
 Tested : 11/30/89 at: 1330
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY	
	%	00:00	24:00	48:00	72:00	96:00	%
100	0	1	1	1	1	1	10
65	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100%

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890310

TEST CONC. %	ELAPSED TIME				
	00:00	24:00	48:00	72:00	96:00

100	pH	8.1			8.1
	O2 ppm	10.0			9.3
	Cond.	451			457
	Temp(C)	15.0	15.0	14.5	14.5
65	pH	8.0			8.1
	O2 ppm	9.4			9.1
	Cond.	492			498
	Temp(C)	15.0	15.0	14.5	14.5
40	pH	7.8			8.4
	O2 ppm	9.2			9.6
	Cond.	518			522
	Temp(C)	15.0	15.0	14.5	14.5
20	pH	7.8			8.2
	O2 ppm	9.2			8.8
	Cond.	544			550
	Temp(C)	15.0	15.0	14.5	14.5
10	pH	7.8			8.4
	O2 ppm	9.2			9.4
	Cond.	554			563
	Temp(C)	15.0	15.0	14.5	14.5
Control	pH	7.7			8.5
	O2 ppm	8.9			9.6
	Cond.	571			572
	Temp(C)	15.0	15.0	14.5	14.5

TOXICITY TEST REPORT

Sample: 01890276

TEST CONDITIONS

Company : Canadian Oxy Chemicals Ltd.
Fort Erie, ONT
(1590009)
Region : Southwest
Industry : Organic Chemical
Control point : OT cooling water, (100)
Laboratory : MOE
Sampling Method : grab
Sampled By : M. Smithson
Date Collected : 11/29/89
Received : 11/30/89
Tested : 12/01/89 at: 1130
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME										TOTAL MORTALITY
	%	00:00	01:10	01:00	02:00	04:00	25:10	51:00	75:10	96:15	%
100	0	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA audit sample.

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01890276

TEST CONC. %	ELAPSED TIME									
		00:00	01:10	01:00	02:00	04:00	25:10	51:00	75:10	96:1
100	pH		7.6		8.1		7.9	7.9	7.8	7.
	O2 ppm		9.7		10.2		9.7	9.7	10.2	9.
	Cond.		330		315		320	320	310	32
	Temp(C)		14.0		15.0		14.0	14.0	15.0	15.
65	pH				8.1		7.9	7.9	7.9	7.
	O2 ppm				10.2		9.7	9.7	10.2	10.
	Cond.				290		300	295	290	30
	Temp(C)				15.0		14.0	14.0	15.0	15.
40	pH				8.0		7.8	7.8	7.7	7.
	O2 ppm				10.0		9.5	9.8	10.1	10.
	Cond.				280		280	280	280	29
	Temp(C)				15.0		14.0	14.0	15.0	15.
30	pH				8.1		7.8	7.8	7.7	7.
	O2 ppm				10.1		9.6	9.8	10.2	10.
	Cond.				270		270	275	275	28
	Temp(C)				15.0		14.0	14.0	15.0	15.
20	pH				8.1		7.8	7.7	7.7	7.
	O2 ppm				10.3		9.4	9.6	10.1	9.
	Cond.				265		270	265	265	27
	Temp(C)				15.0		14.0	14.0	15.0	15.
10	pH				8.1		7.4	7.6	7.6	7.
	O2 ppm				10.1		8.0	9.4	10.0	10.
	Cond.				255		260	260	260	27
	Temp(C)				15.0		14.0	14.0	15.0	15.
Control	pH				8.1		7.7	7.7	7.6	7.
	O2 ppm				10.2		9.8	9.8	10.1	10.
	Cond.				260		240	230	255	26
	Temp(C)				15.0		14.0	14.0	15.0	15.

TOXICITY TEST REPORT

Sample: 03900110

TEST CONDITIONS

Company : Canadian Oxy Chemicals Ltd.
Fort Erie, ONT
(1590009)
Region : Southwest
Industry : Organic Chemical

Control point : OT cooling water, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : T. Currah
Date Collected : 02/12/90
Received : 02/14/90
Tested : 02/14/90 at: 1500

Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY	
	%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0
Control	0	0	0	1	1	1	10
Control	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test - Non Lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900110

TEST CONC. %	E L A P S E D T I M E					
		00:00	24:00	48:00	72:00	96:00
100	pH		8.1			8.3
	O2 ppm		10.2			9.5
	Cond.		523			526
	Temp(C)		16.0	15.0	14.0	14.0
100	pH		8.1			8.3
	O2 ppm		10.2			9.1
	Cond.		523			525
	Temp(C)		16.0	15.0	14.0	14.0
Control	pH		7.9			8.5
	O2 ppm		9.1			9.5
	Cond.		541			523
	Temp(C)		16.0	15.0	14.0	14.0
Control	pH		7.9			8.5
	O2 ppm		9.1			8.9
	Cond.		540			525
	Temp(C)		16.0	15.0	14.0	14.0

COMPANY: Canadian Oxy Chemicals Ltd., Fort Erie
(1590009)
SECTOR: Organic Chemical
REGION: Southwest

SUMMARY

Results of two Daphnia magna acute lethality toxicity tests conducted on samples of once through cooling water collected between October 1989 and March 1990 were submitted by Canadian Oxy Chemicals Ltd. of Fort Erie. Both samples were not acutely lethal to Daphnia. One sample tested in the Ministry laboratory in November was also not acutely lethal to Daphnia.

OT cooling water

03890310 sampled: 11/27/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

02890276 sampled: 11/29/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

03900110 sampled: 02/12/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test

rain gauge

intake water

TOXICITY TEST REPORT

Sample: 03890310

TEST CONDITIONS

Company : Canadian Oxy Chemicals Ltd.
 Fort Erie, ONT
 (1590009)
 Region : Southwest
 Industry : Organic Chemical
 Control point : OT cooling water, (100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : T. Currah
 Date Collected : 11/27/89
 Received : 11/29/89
 Tested : 11/30/89 at: 1120
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY	
	%	00:00	24:00	48:00	%
100	0	0	0	0	0
50	0	0	0	0	0
25	0	0	0	0	0
13	0	0	0	0	0
6	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :TOXICITY TEST PARAMETERS

Sample Number: 03890310

TEST CONC. %	ELAPSED TIME		
	00:00	24:00	48:00

100	pH	8.1	8.2
	O2 ppm	9.6	9.6
	Cond.	440	443
	Temp(C)	19.0	19.5
50	pH	8.1	8.3
	O2 ppm	9.1	9.7
	Cond.	373	377
	Temp(C)	19.0	19.5
25	pH	8.3	8.3
	O2 ppm	9.1	9.8
	Cond.	341	346
	Temp(C)	19.0	19.5
13	pH	8.3	8.3
	O2 ppm	9.1	10.1
	Cond.	325	330
	Temp(C)	19.0	19.5
6	pH	8.3	8.3
	O2 ppm	9.1	9.8
	Cond.	316	314
	Temp(C)	19.0	19.5
Control	pH	8.4	8.4
	O2 ppm	9.1	9.4
	Cond.	306	306
	Temp(C)	19.0	19.5

TOXICITY TEST REPORT

Sample: 02890276

TEST CONDITIONS

Company : Canadian Oxy Chemicals Ltd.
Fort Erie, ONT
(1590009)
Region : Southwest
Industry : Organic Chemical
Control point : OT cooling water, (100)
Laboratory : MOE
Sampling Method : grab
Sampled By : Smithson&Trach
Date Collected : 11/29/89
Received : 11/30/89
Tested : 11/30/89 at: 1336
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY	
	%	00:00	01:39	24:39		48:39
100	0	0	0	0	0	0
60	0	0	0	0	0	0
30	0	0	0	0	0	0
15	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

48 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments : MISA Audit

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02890276

TEST CONC. %	ELAPSED TIME			
	00:00	01:39	24:39	48:39

100	pH	7.9			7.9
	O2 ppm	9.2			8.6
	Cond.	375			383
	Temp(C)	20.0	20.0	20.0	20.0
60	pH	8.0			7.8
	O2 ppm	9.2			8.6
	Cond.	351			354
	Temp(C)	20.0	20.0	20.0	20.0
30	pH	8.0			7.7
	O2 ppm	9.2			8.6
	Cond.	331			334
	Temp(C)	20.0	20.0	20.0	20.0
15	pH	8.0			7.8
	O2 ppm	9.2			8.5
	Cond.	321			322
	Temp(C)	20.0	20.0	20.0	20.0
5	pH	8.0			7.7
	O2 ppm	9.2			8.5
	Cond.	315			318
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH	8.0			7.5
	O2 ppm	9.1			8.6
	Cond.	300			303
	Temp(C)	20.0	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 03900110

TEST CONDITIONS

Company : Canadian Oxy Chemicals Ltd.
Fort Erie, ONT
(1590009)
Region : Southwest
Industry : Organic Chemical
Control point : OT cooling water, (100)
Laboratory : BAR
Sampling Method : Grab
Sampled By : T. Currah
Date Collected : 02/12/90
Received : 02/14/90
Tested : 02/14/90 at: 1110
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
100	0	0	0	0
Control	0	0	1	8
Control	0	0	0	0

48 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments : Single Concentration Test

TOXICITY TEST PARAMETERS

Sample Number: 03900110

TEST CONC. %	E L A P S E D T I M E		
	00:00	24:00	48:00

100	pH	8.0	8.3
	O2 ppm	9.1	8.5
	Cond.	516	523
	Temp(C)	20.5	20.0
100	pH	8.0	8.3
	O2 ppm	9.1	8.5
	Cond.	516	515
	Temp(C)	20.5	20.0
Control	pH	8.6	8.5
	O2 ppm	8.8	8.5
	Cond.	299	307
	Temp(C)	20.5	20.0
Control	pH	8.6	8.5
	O2 ppm	8.8	8.4
	Cond.	299	302
	Temp(C)	20.5	20.0

COMPANY: Celanese Canada Inc., Millhaven
(1730001)
SECTOR: Organic Chemical
REGION: Southeast

SUMMARY

The data for eighteen trout bioassays, conducted on combined effluent samples collected between October 1989 and March 1990, were provided by Celanese Canada Incorporated. All six combined effluent samples collected from control point 0100 were determined to have been non-acutely lethal to test fish. An audit sample collected from control point 0100 in December was tested by O.M.E. laboratory and it too was determined to have been non-acutely lethal. Five combined effluent samples collected from control point 0200 were determined to have been non-acutely lethal. One sample from this discharge had a 96 hour LC50 > 100 %. An audit sample collected from control point 0200 in December was determined to have been non-acutely lethal. All six combined effluent samples collected from control point 0300 were determined to have been non-acutely lethal. An audit sample collected in December from this discharge was also determined to have been non-acutely lethal by the O.M.E. laboratory.

combined effluent

06890944 sampled: 10/01/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

06891047 sampled: 11/06/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

06891173 sampled: 12/04/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

01890288 sampled: 12/11/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA audit sample.

06900097 sampled: 01/16/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

06900224 sampled: 02/05/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

Celanese Canada Inc. (continued)

06900335 sampled: 03/04/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

combined effluent

06890946 sampled: 10/01/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

06891045 sampled: 11/06/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

06891171 sampled: 12/04/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: 10% MORTALITY IN FULL STRENGTH EFFLUENT

01890286 sampled: 12/11/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA audit sample.

06900099 sampled: 01/16/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

06900226 sampled: 02/05/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

06900337 sampled: 03/04/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

combined effluent

06890948 sampled: 10/01/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

06891049 sampled: 11/06/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

06891175 sampled: 12/04/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

01890287 sampled: 12/11/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA audit sample.

Celanese Canada Inc. (continued)

06900101 sampled: 01/16/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

06900228 sampled: 02/05/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

06900339 sampled: 03/04/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

process effluent

emergency overflow

storm water

rain gauge

intake water

TOXICITY TEST REPORT

Sample: 06890944

TEST CONDITIONS

Company : Celanese Canada Inc.
 Millhaven, ONT
 (1730001)
 Region : Southeast
 Industry : Organic Chemical

Control point : combined effluent, (100)

Laboratory : BEAK
 Sampling Method : 24HR COMPOSITE
 Sampled By : WAYNE SCOTT
 Date Collected : 10/01/89
 Received : 10/02/89
 Tested : 10/03/89 at: 1130

Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
50	0	0	0	0	0	0
30	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

SLOPE of Mortality Curve :
 LC50 Calculated By : MOVING AVERAGE

TOXICITY TEST PARAMETERS

Sample Number: 06890944

TEST ELAPSED TIME
 CONC. % 00:00 24:00 48:00 72:00 96:00

100	pH	7.9	8.0	8.0	8.1	8.1
	O2 ppm	9.4	9.5	9.7	8.5	8.3
	Cond.	407				415
	Temp(C)	15.0	15.0	15.0	15.0	15.0
65	pH	7.9	7.9	8.0	8.1	8.0
	O2 ppm	9.5	9.4	9.5	8.7	8.3
	Cond.	395				402
	Temp(C)	15.0	15.0	15.0	15.0	15.0
50	pH	7.8	7.9	8.0	8.2	8.2
	O2 ppm	9.6	9.5	9.6	8.8	8.9
	Cond.	390				396
	Temp(C)	15.0	15.0	15.0	15.0	15.0
30	pH	7.8	7.9	8.0	8.0	8.0
	O2 ppm	9.6	9.6	9.7	8.3	8.9
	Cond.	385				391
	Temp(C)	15.0	15.0	15.0	15.0	15.0
20	pH	7.8	8.0	8.1	7.9	8.1
	O2 ppm	9.7	9.7	9.5	8.4	8.7
	Cond.	381				386
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.8	8.1	8.1	8.1	8.2
	O2 ppm	9.5	9.6	9.7	8.5	8.6
	Cond.	378				384
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.6	7.9	7.9	8.0	8.1
	O2 ppm	9.6	9.7	9.6	8.5	8.8
	Cond.	362				365
	Temp(C)	15.0	15.0	15.0	15.0	20.0

TOXICITY TEST REPORT

Sample: 06891047

TEST CONDITIONS

Company : Celanese Canada Inc.
Millhaven, ONT
(1730001)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (100)
Laboratory : BEAK
Sampling Method : GRAB
Sampled By : WAYNE SCOTT
Date Collected : 11/06/89
Received : 11/06/89
Tested : 11/06/89 at: 1600
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0
10	0	0	0	0	0	0
20	0	0	0	0	0	0
30	0	0	0	0	0	0
50	0	0	0	0	0	0
65	0	0	0	0	0	0
100	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

TOXICITY TEST PARAMETERS

Sample Number: 06891047

TEST
CONC.
%

E L A P S E D T I M E

00:00 24:00 48:00 72:00 96:00

Control	pH	8.2	8.0	8.2	8.1	8.1
	O2 ppm	7.5	7.6	7.6	7.8	7.6
	Cond.	288				366
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	8.2	8.4	8.5	8.3	8.0
	O2 ppm	7.7	9.7	9.0	7.9	7.6
	Cond.	295				357
	Temp(C)	15.0	15.0	15.0	15.0	15.0
20	pH	8.2	8.4	8.6	8.6	8.0
	O2 ppm	8.7	9.6	9.6	9.7	8.1
	Cond.	306				358
	Temp(C)	15.0	15.0	15.0	15.0	15.0
30	pH	8.2	8.5	8.6	8.5	8.1
	O2 ppm	9.4	9.7	9.6	9.6	9.4
	Cond.	309				361
	Temp(C)	15.0	15.0	15.0	15.0	15.0
50	pH	8.2	8.5	8.6	8.5	8.2
	O2 ppm	9.4	9.8	9.8	9.7	9.2
	Cond.	314				347
	Temp(C)	15.0	15.0	15.0	15.0	15.0
65	pH	8.3	8.5	8.6	8.5	8.0
	O2 ppm	9.7	9.9	9.8	9.8	7.7
	Cond.	321				377
	Temp(C)	15.0	15.0	15.0	15.0	15.0
100	pH	8.3	8.4	8.6	8.5	8.0
	O2 ppm	9.6	9.9	9.8	9.9	8.1
	Cond.	330				383
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 06891173

TEST CONDITIONS

Company : Celanese Canada Inc.
 Millhaven, ONT
 (1730001)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : BEAK
 Sampling Method : GRAB
 Sampled By : WAYNE SCOTT
 Date Collected : 12/04/89
 Received : 12/05/89
 Tested : 12/05/89 at: 1700

Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0
10	0	0	0	0	0	0
20	0	0	0	0	0	0
30	0	0	0	0	0	0
50	0	0	0	0	0	0
65	0	0	0	0	0	0
100	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

SLOPE of Mortality Curve :
 LC50 Calculated By : MOVING AVERAGE

TOXICITY TEST PARAMETERS

Sample Number: 06891173

TEST ELAPSED TIME
 CONC. % 00:00 24:00 48:00 72:00 96:00

Control	pH	7.8	7.8	8.0	7.9	8.1
	O2 ppm	9.4	8.4	8.4	8.2	9.3
	Cond.	407				390
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.7	7.7	8.0	8.0	8.0
	O2 ppm	9.6	10.2	8.9	9.8	9.8
	Cond.	425				365
	Temp(C)	15.0	15.0	15.0	15.0	15.0
20	pH	7.8	7.7	8.0	8.0	7.9
	O2 ppm	9.2	8.9	9.3	9.7	8.4
	Cond.	389				366
	Temp(C)	15.0	15.0	15.0	15.0	15.0
30	pH	8.0	7.8	8.0	8.0	8.0
	O2 ppm	9.5	9.6	9.6	9.6	9.9
	Cond.	372				367
	Temp(C)	15.0	15.0	15.0	15.0	15.0
50	pH	7.9	7.7	7.9	8.0	8.0
	O2 ppm	9.6	9.2	9.3	9.7	8.2
	Cond.	373				375
	Temp(C)	15.0	15.0	15.0	15.0	15.0
65	pH	8.0	7.8	7.8	8.1	8.0
	O2 ppm	9.7	9.9	10.2	9.6	9.9
	Cond.	369				377
	Temp(C)	15.0	15.0	15.0	15.0	15.0
100	pH	7.9	7.7	7.8	8.1	8.0
	O2 ppm	10.4	10.3	9.7	9.3	9.3
	Cond.	380				387
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 01890288

TEST CONDITIONS

Company : Celanese Canada Inc.
 Millhaven, ONT
 (1730001)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : MOE
 Sampling Method : grab
 Sampled By : A. Verbaas
 Date Collected : 12/11/89
 Received : 12/13/89
 Tested : 12/14/89 at: 1420
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E										TOTAL MORTALITY
	%	00:00	00:30	01:00	02:00	04:00	24:00	47:10	72:00	96:00	%
100	0	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA audit sample.

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01890288

TEST CONC. %	E L A P S E D T I M E									
		00:00	00:30	01:00	02:00	04:00	24:00	47:10	72:00	96:0
100	pH			7.4	7.6		8.0	7.9	7.9	7.
	O2 ppm			9.8	9.9		10.9	10.7	10.3	9.
	Cond.			270	275		270	290	295	28
	Temp(C)			15.0	15.0		14.0	14.0	14.0	14.
65	pH				7.6		8.0	7.8	7.7	7.
	O2 ppm				9.9		10.7	10.4	10.2	9.
	Cond.				260		265	280	265	27
	Temp(C)				15.0		14.0	14.0	14.0	14.
40	pH				7.6		8.0	7.9	7.8	7.
	O2 ppm				10.0		10.9	10.5	10.2	9.
	Cond.				245		265	270	265	26
	Temp(C)				15.0		14.0	14.0	14.0	14.
30	pH				7.6		8.0	8.0	7.8	7.
	O2 ppm				10.0		10.7	10.8	10.5	9.
	Cond.				255		250	265	260	26
	Temp(C)				15.0		14.0	14.0	14.0	14.
20	pH				7.6		8.0	7.9	7.8	7.
	O2 ppm				9.9		10.9	10.7	10.4	9.
	Cond.				255		250	260	260	25
	Temp(C)				15.0		14.0	14.0	14.0	14.
10	pH				7.6		8.0	8.0	7.8	7.
	O2 ppm				10.0		10.9	10.7	10.6	9.
	Cond.				250		250	260	260	24
	Temp(C)				15.0		14.0	14.0	14.0	14.
Control	pH				7.7		7.9	7.9	7.7	7.
	O2 ppm				9.7		10.7	10.8	10.5	9.
	Cond.				245		245	250	240	24
	Temp(C)				15.0		14.0	14.0	14.0	14.

TOXICITY TEST REPORT

Sample: 06900097

TEST CONDITIONS

Company : Celanese Canada Inc.
 Millhaven, ONT
 (1730001)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : BEAK
 Sampling Method : GRAB
 Sampled By : WAYNE SCOTT
 Date Collected : 01/16/90
 Received : 01/17/90
 Tested : 01/17/90 at: 1800
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0
10	0	0	0	0	0	0
20	0	0	0	0	0	0
30	0	0	0	0	0	0
50	0	0	0	0	0	0
65	0	0	0	0	0	0
100	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

SLOPE of Mortality Curve :
 LC50 Calculated By : MOVING AVERAGE

TOXICITY TEST PARAMETERS

Sample Number: 06900097

TEST CONC. %	ELAPSED TIME				
	00:00	24:00	48:00	72:00	96:00

Control	pH	7.4	8.1	8.2	8.2	8.2
	O2 ppm	9.7	9.0	9.1	8.8	8.6
	Cond.	361				401
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.5	8.0	8.1	8.2	8.1
	O2 ppm	10.2	10.0	9.9	9.3	9.2
	Cond.	365				362
	Temp(C)	15.0	15.0	15.0	15.0	15.0
20	pH	7.5	8.0	8.1	8.2	8.1
	O2 ppm	10.1	9.3	8.9	8.8	9.3
	Cond.	376				372
	Temp(C)	15.0	15.0	15.0	15.0	15.0
30	pH	7.6	8.0	8.2	8.2	8.1
	O2 ppm	10.2	10.4	9.3	9.1	9.1
	Cond.	384				382
	Temp(C)	15.0	15.0	15.0	15.0	15.0
50	pH	7.6	7.9	8.1	8.1	7.9
	O2 ppm	9.2	8.6	8.4	8.4	8.1
	Cond.	401				402
	Temp(C)	15.0	15.0	15.0	15.0	15.0
65	pH	7.7	8.0	8.2	8.2	8.1
	O2 ppm	9.8	9.1	9.3	9.2	9.1
	Cond.	414				414
	Temp(C)	15.0	15.0	15.0	15.0	15.0
100	pH	7.7	8.0	8.2	8.2	8.1
	O2 ppm	9.4	8.8	9.4	8.7	8.6
	Cond.	439				439
	Temp(C)	15.0	15.0	15.0	15.0	15.0

MISA Trout

TOXICITY TEST REPORT

Sample: 06900224

TEST CONDITIONS

Company : Celanese Canada Inc.
 Millhaven, ONT
 (1730001)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : BEAK
 Sampling Method : GRAB
 Sampled By : WAYNE SCOTT
 Date Collected : 02/05/90
 Received : 02/06/90
 Tested : 02/07/90 at: 1230
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
50	0	0	0	0	0	0
30	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

SLOPE of Mortality Curve :
 LC50 Calculated By : MOVING AVERAGE

TOXICITY TEST PARAMETERS

Sample Number: 06900224

TEST E L A P S E D T I M E
 CONC. % 00:00 24:00 48:00 72:00 96:00

100	pH	7.9	8.1	8.1	8.0	8.1
	O2 ppm	9.3	8.3	8.2	9.3	9.5
	Cond.	443				464
	Temp(C)	15.0	15.0	15.0	15.0	15.0
65	pH	7.8	8.1	8.1	8.1	8.1
	O2 ppm	9.4	8.4	8.4	9.1	9.4
	Cond.	425				451
	Temp(C)	15.0	15.0	15.0	15.0	15.0
50	pH	7.8	8.1	8.1	8.0	8.1
	O2 ppm	9.6	8.1	8.1	9.0	9.3
	Cond.	418				444
	Temp(C)	15.0	15.0	15.0	15.0	15.0
30	pH	7.8	8.0	8.2	8.1	8.1
	O2 ppm	9.7	8.0	9.0	8.9	9.4
	Cond.	408				437
	Temp(C)	15.0	15.0	15.0	15.0	15.0
20	pH	7.8	8.2	8.2	8.1	8.2
	O2 ppm	9.6	9.3	9.3	9.3	9.2
	Cond.	407				436
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.7	8.0	8.0	7.9	8.0
	O2 ppm	9.5	8.3	8.3	9.1	8.9
	Cond.	403				446
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.7	8.1	8.2	8.0	8.1
	O2 ppm	9.8	9.3	9.0	8.9	9.0
	Cond.	382				410
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 06900335

TEST CONDITIONS

Company : Celanese Canada Inc.
 Millhaven, ONT
 (1730001)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : BEAK
 Sampling Method : GRAB
 Sampled By : WAYNE SCOTT
 Date Collected : 03/04/90
 Received : 03/06/90
 Tested : 03/07/90 at: 1400
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
50	0	0	0	0	0	0
30	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

SLOPE of Mortality Curve :
 LC50 Calculated By : MOVING AVERAGE

TOXICITY TEST PARAMETERS

Sample Number: 06900335

TEST ELAPSED TIME
 CONC. % 00:00 24:00 48:00 72:00 96:00

100	pH	7.6	8.2	8.1	8.2	8.1
	O2 ppm	7.7	9.6	8.7	10.4	9.6
	Cond.	472				459
	Temp(C)	15.0	15.0	15.0	15.0	15.0
65	pH	7.7	8.2	8.1	8.1	8.1
	O2 ppm	8.9	9.8	8.7	10.4	9.9
	Cond.	449				447
	Temp(C)	15.0	15.0	15.0	15.0	15.0
50	pH	7.7	8.1	8.0	8.0	8.1
	O2 ppm	8.8	9.7	8.3	10.2	9.6
	Cond.	437				446
	Temp(C)	15.0	15.0	15.0	15.0	15.0
30	pH	7.8	8.2	8.1	8.1	7.9
	O2 ppm	9.3	9.6	8.7	10.4	9.6
	Cond.	423				445
	Temp(C)	15.0	15.0	15.0	15.0	15.0
20	pH	7.8	8.2	8.1	8.1	8.1
	O2 ppm	9.6	9.5	8.7	10.2	9.7
	Cond.	417				444
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.8	8.2	8.0	8.0	8.0
	O2 ppm	9.2	9.6	8.7	10.1	9.4
	Cond.	410				445
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	8.0	8.1	8.1	7.9	7.8
	O2 ppm	9.0	9.1	8.9	10.4	9.6
	Cond.	413				398
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 06890946

TEST CONDITIONS

Company : Celanese Canada Inc.
 Millhaven, ONT
 (1730001)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (200)
 Laboratory : BEAK
 Sampling Method : 24HR COMPOSITE
 Sampled By : WAYNE SCOTT
 Date Collected : 10/01/89
 Received : 10/02/89
 Tested : 10/03/89 at: 1130
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
50	0	0	0	0	0	0
30	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

SLOPE of Mortality Curve :
 LC50 Calculated By : MOVING AVERAGE

TOXICITY TEST PARAMETERS

Sample Number: 06890946

TEST CONC. %	ELAPSED TIME				
	00:00	24:00	48:00	72:00	96:00
100	pH 7.8	8.1	8.1	8.1	8.2
	O2 ppm 9.5	9.5	9.7	8.6	8.7
	Cond. 369				377
	Temp(C) 15.0	15.0	15.0	15.0	15.0
65	pH 7.8	8.0	8.0	8.0	8.0
	O2 ppm 9.5	9.5	9.7	8.5	8.8
	Cond. 371				379
	Temp(C) 15.0	15.0	15.0	15.0	15.0
50	pH 7.7	8.1	8.0	8.1	8.2
	O2 ppm 9.6	9.4	9.6	8.7	9.1
	Cond. 373				380
	Temp(C) 15.0	15.0	15.0	15.0	15.0
30	pH 7.7	8.0	7.9	8.0	8.0
	O2 ppm 9.7	9.5	9.7	8.4	8.8
	Cond. 375				382
	Temp(C) 15.0	15.0	15.0	15.0	15.0
20	pH 7.6	8.0	7.8	8.1	8.1
	O2 ppm 9.5	9.5	9.6	8.3	8.7
	Cond. 375				384
	Temp(C) 15.0	15.0	15.0	15.0	15.0
10	pH 7.6	7.9	7.9	7.8	7.8
	O2 ppm 9.4	9.6	9.5	8.0	8.2
	Cond. 374				386
	Temp(C) 15.0	15.0	15.0	15.0	15.0
Control	pH 7.6	7.9	7.9	8.0	8.1
	O2 ppm 9.6	9.7	9.6	8.5	8.8
	Cond. 362				365
	Temp(C) 15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 06891045

TEST CONDITIONS

Company : Celanese Canada Inc.
Millhaven, ONT
(1730001)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (200)
Laboratory : BEAK
Sampling Method : GRAB
Sampled By : WAYNE SCOTT
Date Collected : 11/06/89
Received : 11/06/89
Tested : 11/06/89 at: 1600
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY %
	%	00:00	24:00	48:00	72:00	96:00
Control	0	0	0	0	0	0
10	0	0	0	0	0	0
20	0	0	0	0	0	0
30	0	0	0	0	0	0
50	0	0	0	0	0	0
65	0	0	0	0	0	0
100	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

TOXICITY TEST PARAMETERS

Sample Number: 06891045

TEST CONC. %	ELAPSED TIME				
	00:00	24:00	48:00	72:00	96:00

Control	pH	8.2	8.0	8.2	8.1	8.1
	O2 ppm	7.5	7.6	7.6	7.8	7.6
	Cond.	288				366
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	8.3	8.6	8.5	8.4	8.1
	O2 ppm	8.7	9.5	9.7	9.5	9.8
	Cond.	291				345
	Temp(C)	15.0	15.0	15.0	15.0	15.0
20	pH	8.3	8.5	8.5	8.4	8.1
	O2 ppm	9.0	9.8	9.8	9.0	8.8
	Cond.	296				341
	Temp(C)	15.0	15.0	15.0	15.0	15.0
30	pH	8.3	8.5	8.5	8.5	8.1
	O2 ppm	9.7	9.8	9.8	9.4	9.6
	Cond.	294				338
	Temp(C)	15.0	15.0	15.0	15.0	15.0
50	pH	8.3	8.6	8.5	8.5	8.1
	O2 ppm	9.8	9.8	9.9	9.7	10.0
	Cond.	289				332
	Temp(C)	15.0	15.0	15.0	15.0	15.0
65	pH	8.4	8.6	8.6	8.5	8.2
	O2 ppm	9.9	10.0	10.0	9.9	10.1
	Cond.	285				329
	Temp(C)	15.0	15.0	15.0	15.0	15.0
100	pH	8.6	8.6	8.6	8.5	8.1
	O2 ppm	10.0	10.0	10.0	9.5	10.0
	Cond.	274				322
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 06891171

TEST CONDITIONS

Company : Celanese Canada Inc.
 Millhaven, ONT
 (1730001)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (200)
 Laboratory : BEAK
 Sampling Method : GRAB
 Sampled By : WAYNE SCOTT
 Date Collected : 12/04/89
 Received : 12/05/89
 Tested : 12/05/89 at: 1730
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
	%	00:00	24:00	48:00	72:00	96:00
Control	0	0	0	0	0	0
10	0	0	0	0	0	0
20	0	0	0	0	0	0
30	0	0	0	0	0	0
50	0	0	0	0	0	0
65	0	0	0	0	0	0
100	0	0	0	1	1	10

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : 10% MORTALITY IN FULL STRENGTH EFFLUENT

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 06891171

TEST CONC. %	E L A P S E D T I M E				
	00:00	24:00	48:00	72:00	96:00

Control	pH	7.8	7.8	8.0	8.0	8.1
	O2 ppm	9.4	8.4	8.4	8.4	9.3
	Cond.	407				390
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.8	7.5	8.0	8.0	8.0
	O2 ppm	9.3	9.2	9.3	8.7	9.7
	Cond.	364				371
	Temp(C)	15.0	15.0	15.0	15.0	15.0
20	pH	7.8	7.6	7.9	8.0	8.0
	O2 ppm	9.4	8.4	9.3	9.1	8.9
	Cond.	362				366
	Temp(C)	15.0	15.0	15.0	15.0	15.0
30	pH	7.8	7.6	7.9	8.0	8.0
	O2 ppm	9.5	8.7	9.6	9.3	9.4
	Cond.	361				361
	Temp(C)	15.0	15.0	15.0	15.0	15.0
50	pH	7.8	7.5	7.9	8.0	8.0
	O2 ppm	9.7	8.4	9.9	9.6	9.3
	Cond.	344				356
	Temp(C)	15.0	15.0	15.0	15.0	15.0
65	pH	7.8	7.6	7.9	8.0	8.0
	O2 ppm	9.8	8.8	9.6	9.5	9.3
	Cond.	345				349
	Temp(C)	15.0	15.0	15.0	15.0	15.0
100	pH	7.9	7.6	7.9	8.0	8.0
	O2 ppm	10.0	9.3	9.9	9.4	8.7
	Cond.	308				339
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 01890286

TEST CONDITIONS

Company : Celanese Canada Inc.
 Millhaven, ONT
 (1730001)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (200)
 Laboratory : MOE
 Sampling Method : grab
 Sampled By : A. Verbaas
 Date Collected : 12/11/89
 Received : 12/13/89
 Tested : 12/14/89 at: 1400
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME										TOTAL MORTALITY
%	00:00	00:30	01:00	02:00	04:00	23:30	47:00	72:00	96:00	%	
100	0	0	0	0	0	0	0	0	0	0	
65	0	0	0	0	0	0	0	0	0	0	
40	0	0	0	0	0	0	0	0	0	0	
30	0	0	0	0	0	0	0	0	0	0	
20	0	0	0	0	0	0	0	0	0	0	
10	0	0	0	0	0	0	0	0	0	0	
Control	0	0	0	0	0	0	0	0	0	0	

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA audit sample.

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01890286

TEST CONC. %	ELAPSED TIME									
	00:00	00:30	01:00	02:00	04:00	23:30	47:00	72:00	96:00	
100	pH	7.6	7.7			7.9	8.0	7.8	7.	
	O2 ppm	10.7	10.1			10.8	11.0	10.8	9.	
	Cond.	240	235			225	240	245	23	
	Temp(C)	15.0	15.0			15.0	15.0	15.0	15.	
65	pH		7.7			8.0	7.9	7.9	7.	
	O2 ppm		10.1			11.0	11.1	10.8	10.	
	Cond.		230			225	245	250	23	
	Temp(C)		15.0			15.0	15.0	15.0	15.	
40	pH		7.6			8.0	7.9	7.8	7.	
	O2 ppm		10.1			10.8	10.9	10.7	9.	
	Cond.		240			245	245	250	23	
	Temp(C)		15.0			15.0	15.0	15.0	15.	
30	pH		7.6			7.8	7.9	7.8	7.	
	O2 ppm		10.0			10.8	10.9	10.5	9.	
	Cond.		245			245	250	250	23	
	Temp(C)		15.0			15.0	15.0	15.0	15.	
20	pH		7.5			7.9	7.9	7.8	7.	
	O2 ppm		10.0			10.8	10.8	10.7	10.	
	Cond.		245			245	250	250	23	
	Temp(C)		15.0			15.0	15.0	15.0	15.	
10	pH		7.6			8.0	7.9	7.8	7.	
	O2 ppm		9.8			10.8	10.9	10.7	9.	
	Cond.		245			250	250	250	24	
	Temp(C)		15.0			15.0	15.0	15.0	15.	
Control	pH		7.6			8.0	7.9	7.6	7.	
	O2 ppm		9.8			10.8	10.8	10.6	10.	
	Cond.		250			250	230	230	25	
	Temp(C)		15.0			15.0	15.0	15.0	15.	

TOXICITY TEST REPORT

Sample: 06900099

TEST CONDITIONS

Company : Celanese Canada Inc.
 Millhaven, ONT
 (1730001)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (200)
 Laboratory : BEAK
 Sampling Method : GRAB
 Sampled By : WAYNE SCOTT
 Date Collected : 01/16/90
 Received : 01/17/90
 Tested : 01/17/90 at: 1830
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY	
	%	00:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

SLOPE of Mortality Curve :
 LC50 Calculated By : MOVING AVERAGE

TOXICITY TEST PARAMETERS

Sample Number: 06900099

TEST E L A P S E D T I M E
 CONC. % 00:00 24:00 48:00 72:00 96:00

Control	pH	7.4	8.1	8.2	8.2	8.2
	O2 ppm	9.7	9.0	9.1	8.8	8.6
	Cond.	361				401
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.1	7.6	7.8	7.9	8.0
	O2 ppm	9.5	8.4	8.2	7.8	8.0
	Cond.	380				427
	Temp(C)	15.0	15.0	15.0	15.0	15.0
20	pH	7.3	7.8	8.0	8.0	7.9
	O2 ppm	9.5	8.1	8.1	8.1	7.8
	Cond.	375				401
	Temp(C)	15.0	15.0	15.0	15.0	15.0
30	pH	7.4	8.0	8.2	8.3	8.2
	O2 ppm	9.4	8.0	8.3	8.3	8.3
	Cond.	372				393
	Temp(C)	15.0	15.0	15.0	15.0	15.0
50	pH	7.5	8.0	8.2	8.2	8.1
	O2 ppm	9.5	8.1	8.6	8.1	8.1
	Cond.	367				385
	Temp(C)	15.0	15.0	15.0	15.0	15.0
65	pH	7.6	8.0	8.2	8.2	8.2
	O2 ppm	8.9	8.8	8.6	8.6	8.7
	Cond.	360				371
	Temp(C)	15.0	15.0	15.0	15.0	15.0
100	pH	7.7	7.9	8.1	8.1	8.1
	O2 ppm	8.7	8.5	8.5	8.3	7.9
	Cond.	355				349
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 06900226

TEST CONDITIONS

Company : Celanese Canada Inc.
 Millhaven, ONT
 (1730001)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (200)
 Laboratory : BEAK
 Sampling Method : GRAB
 Sampled By : WAYNE SCOTT
 Date Collected : 02/05/90
 Received : 02/06/90
 Tested : 02/07/90 at: 1300
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY	
	%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

SLOPE of Mortality Curve :
 LC50 Calculated By : MOVING AVERAGE

TOXICITY TEST PARAMETERS

Sample Number: 06900226

TEST E L A P S E D T I M E
 CONC. % 00:00 24:00 48:00 72:00 96:00

100	pH	8.1	8.1	8.2	8.1	8.2
	O2 ppm	9.2	8.6	8.7	9.3	9.1
	Cond.	331				350
	Temp(C)	15.0	15.0	15.0	15.0	15.0
65	pH	7.9	8.1	8.2	8.1	8.2
	O2 ppm	9.7	8.7	8.7	9.1	9.3
	Cond.	350				378
	Temp(C)	15.0	15.0	15.0	15.0	15.0
50	pH	7.9	8.1	8.1	8.1	8.2
	O2 ppm	9.8	8.7	8.7	9.4	9.2
	Cond.	360				386
	Temp(C)	15.0	15.0	15.0	15.0	15.0
30	pH	7.8	7.9	8.0	8.1	8.2
	O2 ppm	9.9	8.4	8.0	9.2	9.0
	Cond.	375				400
	Temp(C)	15.0	15.0	15.0	15.0	15.0
20	pH	7.9	8.2	8.2	8.2	8.2
	O2 ppm	9.8	9.3	8.8	9.3	9.2
	Cond.	381				405
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.8	8.2	8.2	8.1	8.2
	O2 ppm	9.6	8.9	8.7	9.1	8.7
	Cond.	388				416
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.7	8.1	8.2	8.0	8.1
	O2 ppm	9.8	9.3	9.0	8.9	9.0
	Cond.	382				410
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 06900337

TEST CONDITIONS

Company : Celanese Canada Inc.
 Millhaven, ONT
 (1730001)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (200)
 Laboratory : BEAK
 Sampling Method : GRAB
 Sampled By : WAYNE SCOTT
 Date Collected : 03/04/90
 Received : 03/06/90
 Tested : 03/07/90 at: 1430
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY	
	%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

SLOPE of Mortality Curve :
 LC50 Calculated By : MOVING AVERAGE

TOXICITY TEST PARAMETERS

Sample Number: 06900337

TEST CONC., %		E L A P S E D T I M E				
		00:00	24:00	48:00	72:00	96:00
100	pH	8.1	8.2	8.1	8.1	8.0
	O2 ppm	9.6	9.7	8.4	10.6	10.0
	Cond.	350				339
	Temp(C)	15.0	15.0	15.0	15.0	15.0
65	pH	8.0	8.2	8.1	8.2	8.1
	O2 ppm	9.5	9.6	9.1	10.4	9.8
	Cond.	369				370
	Temp(C)	15.0	15.0	15.0	15.0	15.0
50	pH	7.9	8.1	8.0	8.1	8.0
	O2 ppm	9.6	9.7	9.0	10.4	10.0
	Cond.	377				382
	Temp(C)	15.0	15.0	15.0	15.0	15.0
30	pH	7.9	8.1	8.0	8.1	8.0
	O2 ppm	9.7	9.5	8.9	10.4	9.6
	Cond.	389				400
	Temp(C)	15.0	15.0	15.0	15.0	15.0
20	pH	7.9	8.1	8.0	8.1	8.0
	O2 ppm	9.5	9.4	8.3	10.2	9.8
	Cond.	397				410
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.8	8.2	8.1	8.2	8.1
	O2 ppm	9.7	9.5	9.4	10.0	9.8
	Cond.	403				421
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	8.0	8.1	8.1	7.9	7.8
	O2 ppm	9.0	9.1	8.9	10.4	9.6
	Cond.	413				398
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 06890948

TEST CONDITIONS

Company : Celanese Canada Inc.
 Millhaven, ONT
 (1730001)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (300)
 Laboratory : BEAK
 Sampling Method : GRAB
 Sampled By : WAYNE SCOTT
 Date Collected : 10/01/89
 Received : 10/02/89
 Tested : 10/03/89 at: 1130
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
50	0	0	0	0	0	0
30	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

SLOPE of Mortality Curve :
 LC50 Calculated By : MOVING AVERAGETOXICITY TEST PARAMETERS

Sample Number: 06890948

TEST CONC. %	E L A P S E D T I M E				
	00:00	24:00	48:00	72:00	96:00

100	pH	7.9	8.0	8.1	8.0	8.3
	O2 ppm	9.4	9.5	9.5	8.5	8.8
	Cond.	365				376
	Temp(C)	15.0	15.0	15.0	15.0	15.0
65	pH	7.8	8.0	8.0	7.8	8.2
	O2 ppm	9.3	9.6	9.7	8.5	8.6
	Cond.	372				379
	Temp(C)	15.0	15.0	15.0	15.0	15.0
50	pH	7.8	8.1	8.0	7.9	8.0
	O2 ppm	9.4	9.7	9.6	8.1	8.4
	Cond.	372				381
	Temp(C)	15.0	15.0	15.0	15.0	15.0
30	pH	7.8	7.9	7.9	8.0	8.1
	O2 ppm	9.6	9.6	9.5	8.3	8.7
	Cond.	375				383
	Temp(C)	15.0	15.0	15.0	15.0	15.0
20	pH	7.8	7.9	7.8	8.1	8.2
	O2 ppm	9.5	9.5	9.5	8.7	8.4
	Cond.	377				381
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.8	8.1	7.8	8.2	8.2
	O2 ppm	9.4	9.4	9.6	8.8	8.5
	Cond.	371				383
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.6	7.9	7.9	8.0	8.1
	O2 ppm	9.6	9.7	9.6	8.5	8.8
	Cond.	362				365
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 06891049

TEST CONDITIONS

Company : Celanese Canada Inc.
Millhaven, ONT
(1730001)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (300)
Laboratory : BEAK
Sampling Method : GRAB
Sampled By : WAYNE SCOTT
Date Collected : 11/06/89
Received : 11/06/89
Tested : 11/06/89 at: 1600
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0
10	0	0	0	0	0	0
20	0	0	0	0	0	0
30	0	0	0	0	0	0
50	0	0	0	0	0	0
65	0	0	0	0	0	0
100	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

TOXICITY TEST PARAMETERS

Sample Number: 06891049

TEST CONC. %		ELAPSED TIME				
		00:00	24:00	48:00	72:00	96:00
Control	pH	8.2	8.0	8.2	8.1	8.1
	O2 ppm	7.5	7.6	7.6	7.8	7.6
	Cond.	288				366
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	8.2	8.3	8.3	8.2	8.2
	O2 ppm	9.3	7.0	9.2	9.2	9.1
	Cond.	299				345
	Temp(C)	15.0	15.0	15.0	15.0	15.0
20	pH	8.2	8.5	8.4	8.2	8.4
	O2 ppm	9.6	9.4	9.5	9.3	9.3
	Cond.	298				339
	Temp(C)	15.0	15.0	15.0	15.0	15.0
30	pH	8.3	8.5	8.4	8.2	8.3
	O2 ppm	9.8	9.6	9.7	9.5	9.8
	Cond.	295				336
	Temp(C)	15.0	15.0	15.0	15.0	15.0
50	pH	8.3	8.5	8.4	8.2	8.3
	O2 ppm	9.9	9.9	9.9	9.4	9.2
	Cond.	289				331
	Temp(C)	15.0	15.0	15.0	15.0	15.0
65	pH	8.4	8.4	8.4	8.3	8.3
	O2 ppm	9.9	9.8	9.9	9.5	9.3
	Cond.	285				329
	Temp(C)	15.0	15.0	15.0	15.0	15.0
100	pH	8.5	8.6	8.5	8.4	8.5
	O2 ppm	9.9	9.9	9.9	9.7	9.9
	Cond.	269				321
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 06891175

TEST CONDITIONS

Company : Celanese Canada Inc.
 Millhaven, ONT
 (1730001)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (300)
 Laboratory : BEAK
 Sampling Method : GRAB
 Sampled By : WAYNE SCOTT
 Date Collected : 12/04/89
 Received : 12/05/89
 Tested : 12/05/89 at: 1800
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY %
	%	00:00	24:00	48:00	72:00	96:00
Control	0	0	0	0	0	0
10	0	0	0	0	0	0
20	0	0	0	0	0	0
30	0	0	0	0	0	0
50	0	0	0	0	0	0
65	0	0	0	0	0	0
100	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

SLOPE of Mortality Curve :
 LC50 Calculated By : MOVING AVERAGE

TOXICITY TEST PARAMETERS

Sample Number: 06891175

TEST E L A P S E D T I M E
 CONC. % 00:00 24:00 48:00 72:00 96:00

Control	pH	7.8	7.8	8.0	8.0	8.1
	O2 ppm	9.4	8.4	8.4	8.4	9.3
	Cond.	407				390
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.8	7.7	8.0	8.0	8.0
	O2 ppm	8.9	8.4	10.2	10.1	9.3
	Cond.	356				349
	Temp(C)	15.0	15.0	15.0	15.0	15.0
20	pH	7.8	7.7	7.9	8.0	8.0
	O2 ppm	9.3	9.2	9.9	10.2	9.5
	Cond.	364				351
	Temp(C)	15.0	15.0	15.0	15.0	15.0
30	pH	7.8	7.6	7.9	8.0	8.0
	O2 ppm	9.5	9.3	10.3	9.8	9.2
	Cond.	360				351
	Temp(C)	15.0	15.0	15.0	15.0	15.0
50	pH	8.0	7.9	7.7	7.8	7.9
	O2 ppm	9.7	9.7	9.3	8.7	9.3
	Cond.	349				326
	Temp(C)	15.0	15.0	15.0	15.0	15.0
65	pH	8.1	8.0	7.9	7.9	8.0
	O2 ppm	9.8	9.1	8.9	9.1	9.2
	Cond.	340				356
	Temp(C)	15.0	15.0	15.0	15.0	15.0
100	pH	8.0	7.8	7.8	8.0	7.9
	O2 ppm	9.8	8.7	9.5	9.6	9.3
	Cond.	319				350
	Temp(C)	15.0	15.0	15.0	15.0	15.0

MISA Trout

TOXICITY TEST REPORT

Sample: 01890287

TEST CONDITIONS

Company : Celanese Canada Inc.
 Millhaven, ONT
 (1730001)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (300)
 Laboratory : MOE
 Sampling Method : grab
 Sampled By : A. Verbaas
 Date Collected : 12/11/89
 Received : 12/13/89
 Tested : 12/14/89 at: 1400
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME										TOTAL MORTALITY
%	00:00	00:30	01:00	02:00	04:00	24:00	47:00	72:00	96:00	%	
100	0	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA audit sample.

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01890287

TEST CONC. %	ELAPSED TIME									
	00:00	00:30	01:00	02:00	04:00	24:00	47:00	72:00	96:00	
100	pH	7.6	7.8			8.0	7.9	7.8	7.	
	O2 ppm	11.3	10.1			10.8	10.8	10.5	9.	
	Cond.	235	230			235	245	245	23	
	Temp(C)	15.0	15.0			14.0	14.0	14.0	14.	
65	pH		7.7			8.0	8.0	7.9	7.	
	O2 ppm		10.0			11.0	10.9	10.7	9.	
	Cond.		240			235	250	250	23	
	Temp(C)		15.0			14.0	14.0	14.0	14.	
40	pH		7.7			8.0	7.8	7.8	7.	
	O2 ppm		9.9			10.7	10.8	10.6	9.	
	Cond.		240			235	250	250	24	
	Temp(C)		15.0			14.0	14.0	14.0	14.	
30	pH		7.6			8.0	7.9	7.8	7.	
	O2 ppm		9.9			10.8	11.0	10.7	9.	
	Cond.		240			235	250	250	24	
	Temp(C)		15.0			14.0	14.0	14.0	14.	
20	pH		7.6			8.0	7.9	7.8	7.	
	O2 ppm		9.9			11.2	11.0	10.7	10.	
	Cond.		240			250	245	250	24	
	Temp(C)		15.0			14.0	14.0	14.0	14.	
10	pH		7.6			7.9	7.9	7.9	7.	
	O2 ppm		9.9			10.8	10.9	10.7	10.	
	Cond.		240			250	245	250	24	
	Temp(C)		15.0			14.0	14.0	14.0	14.	
Control	pH		7.6			8.0	7.8	7.8	7.	
	O2 ppm		9.8			10.9	11.0	10.7	10.	
	Cond.		250			245	220	235	23	
	Temp(C)		15.0			14.0	14.0	14.0	14.	

TOXICITY TEST REPORT

Sample: 06900101

TEST CONDITIONS

Company : Celanese Canada Inc.
 Millhaven, ONT
 (1730001)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (300)
 Laboratory : BEAK
 Sampling Method : GRAB
 Sampled By : WAYNE SCOTT
 Date Collected : 01/16/90
 Received : 01/17/90
 Tested : 01/17/90 at: 1845
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0
10	0	0	0	0	0	0
20	0	0	0	0	0	0
30	0	0	0	0	0	0
50	0	0	0	0	0	0
65	0	0	0	0	0	0
100	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

 SLOPE of Mortality Curve :
 LC50 Calculated By : MOVING AVERAGE

TOXICITY TEST PARAMETERS

Sample Number: 06900101

TEST CONC. %	ELAPSED TIME				
	00:00	24:00	48:00	72:00	96:00

Control	pH	7.4	8.1	8.2	8.2	8.2
	O2 ppm	9.7	9.0	9.1	8.8	8.6
	Cond.	361				401
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.6	7.8	8.1	8.1	8.1
	O2 ppm	9.6	8.8	8.7	8.4	7.6
	Cond.	365				396
	Temp(C)	15.0	15.0	15.0	15.0	15.0
20	pH	7.6	7.9	8.1	8.1	8.1
	O2 ppm	9.4	9.3	8.6	8.7	8.2
	Cond.	372				396
	Temp(C)	15.0	15.0	15.0	15.0	15.0
30	pH	7.6	7.9	8.2	8.2	8.2
	O2 ppm	9.7	8.3	8.7	8.4	8.1
	Cond.	372				387
	Temp(C)	15.0	15.0	15.0	15.0	15.0
50	pH	7.6	7.9	8.0	8.0	8.3
	O2 ppm	8.8	8.5	8.3	7.8	8.7
	Cond.	370				379
	Temp(C)	15.0	15.0	15.0	15.0	15.0
65	pH	7.7	7.9	8.2	8.1	8.1
	O2 ppm	8.6	9.3	8.8	8.5	8.2
	Cond.	369				371
	Temp(C)	15.0	15.0	15.0	15.0	15.0
100	pH	7.7	7.9	8.1	8.1	8.1
	O2 ppm	8.1	8.5	8.4	8.8	7.8
	Cond.	361				351
	Temp(C)	15.0	15.0	15.0	15.0	15.0

MISA Trout

TOXICITY TEST REPORT

Sample: 06900228

TEST CONDITIONS

Company : Celanese Canada Inc.
 Millhaven, ONT
 (1730001)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (300)
 Laboratory : BEAK
 Sampling Method : GRAB
 Sampled By : WAYNE SCOTT
 Date Collected : 02/05/90
 Received : 02/06/90
 Tested : 02/07/90 at: 1330
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
50	0	0	0	0	0	0
30	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

SLOPE of Mortality Curve :
 LC50 Calculated By : MOVING AVERAGE

TOXICITY TEST PARAMETERS

Sample Number: 06900228

TEST ELAPSED TIME
 CONC. % 00:00 24:00 48:00 72:00 96:00

100	pH	8.0	8.0	7.9	8.0	8.1
	O2 ppm	9.6	7.8	7.8	9.2	8.8
	Cond.	331				349
	Temp(C)	15.0	15.0	15.0	15.0	15.0
65	pH	7.9	8.0	8.1	8.0	8.1
	O2 ppm	9.6	8.1	8.7	9.3	8.9
	Cond.	352				373
	Temp(C)	15.0	15.0	15.0	15.0	15.0
50	pH	7.8	8.1	8.1	8.0	8.1
	O2 ppm	9.9	8.4	8.4	9.4	9.2
	Cond.	360				385
	Temp(C)	15.0	15.0	15.0	15.0	15.0
30	pH	7.8	7.9	7.9	7.9	8.0
	O2 ppm	9.6	8.8	8.3	8.9	9.3
	Cond.	372				399
	Temp(C)	15.0	15.0	15.0	15.0	15.0
20	pH	7.8	8.0	8.0	8.0	8.1
	O2 ppm	9.7	8.9	8.7	9.2	9.0
	Cond.	378				407
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.8	7.9	8.1	8.0	8.1
	O2 ppm	9.7	8.8	8.3	9.0	8.7
	Cond.	379				411
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.7	8.1	8.2	8.0	8.1
	O2 ppm	9.8	9.3	9.0	8.9	9.0
	Cond.	382				410
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 06900339

TEST CONDITIONS

Company : Celanese Canada Inc.
 Millhaven, ONT
 (1730001)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (300)
 Laboratory : BEAK
 Sampling Method : GRAB
 Sampled By : WAYNE SCOTT
 Date Collected : 03/04/90
 Received : 03/06/90
 Tested : 03/07/90 at: 1500
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
	%	00:00	24:00	48:00	72:00	96:00
100	0	0	0	0	0	0
65	0	0	0	0	0	0
50	0	0	0	0	0	0
30	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

 SLOPE of Mortality Curve :
 LC50 Calculated By : MOVING AVERAGE

TOXICITY TEST PARAMETERS

Sample Number: 06900339

TEST CONC.	E L A P S E D T I M E				
	%	00:00	24:00	48:00	72:00

100	pH	8.1	8.1	8.0	8.1	8.0
	O2 ppm	8.7	9.7	8.2	10.2	9.6
	Cond.	353				345
	Temp(C)	15.0	15.0	15.0	15.0	15.0
65	pH	8.0	8.2	8.1	8.2	8.1
	O2 ppm	9.3	9.8	8.6	10.6	10.0
	Cond.	372				372
	Temp(C)	15.0	15.0	15.0	15.0	15.0
50	pH	8.0	8.2	8.1	8.2	8.1
	O2 ppm	9.5	9.7	9.0	10.6	9.8
	Cond.	378				381
	Temp(C)	15.0	15.0	15.0	15.0	15.0
30	pH	7.9	8.1	8.0	8.0	7.9
	O2 ppm	9.2	9.8	8.9	10.4	9.8
	Cond.	387				396
	Temp(C)	15.0	15.0	15.0	15.0	15.0
20	pH	7.9	8.2	8.1	8.2	8.1
	O2 ppm	9.6	9.8	8.7	10.6	9.0
	Cond.	393				402
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.9	8.2	8.1	8.1	8.0
	O2 ppm	9.7	9.7	9.5	10.4	10.0
	Cond.	399				406
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	8.0	8.1	8.1	7.9	7.8
	O2 ppm	9.0	9.1	8.9	10.4	9.6
	Cond.	413				398
	Temp(C)	15.0	15.0	15.0	15.0	15.0

COMPANY: Celanese Canada Inc., Millhaven
(1730001)
SECTOR: Organic Chemical
REGION: Southeast

SUMMARY

Results for eighteen *Daphnia magna* acute lethality toxicity tests conducted on samples collected from three combined effluent outfalls between October 1989 and March 1990 were submitted by Celanese Canada Inc. of Millhaven. The six samples from combined effluent #100 were not acutely lethal to *Daphnia*. Five samples from combined effluent #200 were not acutely lethal to *Daphnia* and a sixth sample had one mortality in the 100% effluent concentration. All six samples from combined effluent #300 were also nonlethal to *Daphnia*.

Tests conducted in the Ministry laboratory in December on samples of effluent for all three outfalls indicated that the effluents were nonlethal at this time.

combined effluent

06890945 sampled: 10/01/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: NO MORTALITY OR IMMOBILITY OBSERVED IN 48 HRS

06891048 sampled: 11/06/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: NO MORTALITY OR IMMOBILITY OBSERVED IN 48 HRS

06891174 sampled: 12/04/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: NO MORTALITY OR IMMOBILITY OBSERVED IN 48 HRS

02890288 sampled: 12/11/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

06900098 sampled: 01/16/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: NO MORTALITY OR IMMOBILITY OBSERVED IN 48 HRS

06900225 sampled: 02/05/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: NO MORTALITY OR IMMOBILITY OBSERVED IN 48 HRS

06900336 sampled: 03/04/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: NO MORTALITY OR IMMOBILITY OBSERVED IN 48 HRS

Celanese Canada Inc. (continued)

combined effluent

06890947 sampled: 10/01/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: 10% MORTALITY IN FULL STRENGTH EFFLUENT

06891046 sampled: 11/06/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: NO MORTALITY OR IMMOBILITY OBSERVED IN 48 HRS

06891172 sampled: 12/04/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: NO MORTALITY OR IMMOBILITY OBSERVED IN 48 HRS

02890286 sampled: 12/11/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

06900100 sampled: 01/16/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: NO MORTALITY OR IMMOBILITY OBSERVED IN 48 HRS

06900227 sampled: 02/05/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: NO MORTALITY OR IMMOBILITY OBSERVED IN 48 HRS

06900338 sampled: 03/04/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: NO MORTALITY OR IMMOBILITY OBSERVED IN 48 HRS

combined effluent

06891050 sampled: 11/06/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: NO MORTALITY OR IMMOBILITY OBSERVED IN 48 HRS

06891176 sampled: 12/04/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: NO MORTALITY OR IMMOBILITY OBSERVED IN 48 HRS

02890287 sampled: 12/11/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

06900102 sampled: 01/16/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: NO MORTALITY OR IMMOBILITY OBSERVED IN 48 HRS

06900229 sampled: 02/05/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: NO MORTALITY OR IMMOBILITY OBSERVED IN 48 HRS

Celanese Canada Inc. (continued)

06900340 sampled: 03/04/90 non-lethal

95% fid. limits: 0.0 - 0.0 %

comments: NO MORTALITY OR IMMOBILITY OBSERVED IN 48 HRS

process effluent

emergency overflow

storm water

rain gauge

intake water

TOXICITY TEST REPORT

Sample: 06890945

TEST CONDITIONS

Company : Celanese Canada Inc.
 Millhaven, ONT
 (1730001)
 Region : Southeast
 Industry : Organic Chemical

Control point : combined effluent, (100)

Laboratory : BEAK
 Sampling Method : 24HR COMPOSITE
 Sampled By : WAYNE SCOTT
 Date Collected : 10/01/89
 Received : 10/02/89
 Tested : 10/03/89 at: 1140

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
65	0	0	0	0
50	0	0	0	0
30	0	0	0	0
20	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : NO MORTALITY OR IMMOBILITY OBSERVED IN 48 HRS

SLOPE of Mortality Curve :
 LC50 Calculated By : MOVING AVERAGE

TOXICITY TEST PARAMETERS

Sample Number: 06890945

TEST ELAPSED TIME
 CONC. % 00:00 24:00 48:00

100	pH	8.0	8.3
	O2 ppm	8.9	8.4
	Cond.	366	386
	Temp(C)	20.0	20.0
65	pH	8.0	8.3
	O2 ppm	8.9	8.5
	Cond.	352	377
	Temp(C)	20.0	20.0
50	pH	8.0	8.3
	O2 ppm	9.3	8.4
	Cond.	347	371
	Temp(C)	20.0	20.0
30	pH	8.1	8.2
	O2 ppm	9.2	8.7
	Cond.	340	366
	Temp(C)	20.0	20.0
20	pH	8.1	8.2
	O2 ppm	9.2	8.7
	Cond.	337	362
	Temp(C)	20.0	20.0
10	pH	8.1	8.2
	O2 ppm	8.8	8.7
	Cond.	333	358
	Temp(C)	20.0	20.0
Control	pH	8.0	8.2
	O2 ppm	8.8	8.4
	Cond.	319	341
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 06891048

TEST CONDITIONS

Company : Celanese Canada Inc.
Millhaven, ONT
(1730001)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (100)
Laboratory : BEAK
Sampling Method : GRAB
Sampled By : WAYNE SCOTT
Date Collected : 11/06/89
Received : 11/06/89
Tested : 11/06/89 at: 1600
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E			TOTAL MORTALITY
	%	00:00	24:00	48:00
Control	0	0	0	0
10	0	0	0	0
20	0	0	0	0
30	0	0	0	0
50	0	0	0	0
65	0	0	0	0
100	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : NO MORTALITY OR IMMOBILITY OBSERVED IN 48 HRS

TOXICITY TEST PARAMETERS

Sample Number: 06891048

TEST CONC. %	E L A P S E D T I M E		
	00:00	24:00	48:00

Control	pH	8.0	7.9
	O2 ppm	9.1	8.6
	Cond.	355	348
	Temp(C)	20.0	20.0
10	pH	8.2	8.0
	O2 ppm	9.2	8.7
	Cond.	354	352
	Temp(C)	20.0	20.0
20	pH	8.1	8.0
	O2 ppm	9.2	8.7
	Cond.	363	355
	Temp(C)	20.0	20.0
30	pH	8.1	8.1
	O2 ppm	9.3	8.7
	Cond.	388	359
	Temp(C)	20.0	20.0
50	pH	8.0	8.0
	O2 ppm	9.2	8.6
	Cond.	399	366
	Temp(C)	20.0	20.0
65	pH	8.0	8.0
	O2 ppm	9.4	8.5
	Cond.	405	372
	Temp(C)	20.0	20.0
100	pH	7.9	8.0
	O2 ppm	9.4	8.2
	Cond.	419	386
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 06891174

TEST CONDITIONS

Company : Celanese Canada Inc.
 Millhaven, ONT
 (1730001)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : BEAK
 Sampling Method : GRAB
 Sampled By : WAYNE SCOTT
 Date Collected : 12/04/89
 Received : 12/05/89
 Tested : 12/05/89 at: 1820
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00	48:00
Control	0	0	0	0
10	0	0	0	0
20	0	0	0	0
30	0	0	0	0
50	0	0	0	0
65	0	0	0	0
100	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : NO MORTALITY OR IMMOBILITY OBSERVED IN 48 HRS

SLOPE of Mortality Curve :
 LC50 Calculated By : MOVING AVERAGE

TOXICITY TEST PARAMETERS

Sample Number: 06891174

TEST CONC. %	ELAPSED TIME		
	00:00	24:00	48:00

Control	pH	8.2	7.9
	O2 ppm	8.4	8.3
	Cond.	378	387
	Temp(C)	20.0	20.0
10	pH	8.1	8.1
	O2 ppm	8.2	8.7
	Cond.	386	392
	Temp(C)	20.0	20.0
20	pH	8.1	8.1
	O2 ppm	8.1	8.7
	Cond.	393	404
	Temp(C)	20.0	20.0
30	pH	8.1	8.1
	O2 ppm	8.4	8.7
	Cond.	398	407
	Temp(C)	20.0	20.0
50	pH	8.0	8.1
	O2 ppm	8.4	8.7
	Cond.	406	412
	Temp(C)	20.0	20.0
65	pH	8.0	8.1
	O2 ppm	8.5	8.7
	Cond.	415	418
	Temp(C)	20.0	20.0
100	pH	7.9	8.0
	O2 ppm	8.8	8.6
	Cond.	432	431
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 02890288

TEST CONDITIONS

Company : Celanese Canada Inc.
Millhaven, ONT
(1730001)
Region : Southeast
Industry : Organic Chemical

Control point : combined effluent, (100)

Laboratory : MOE
Sampling Method : grab
Sampled By : A. Verbaas
Date Collected : 12/11/89
Received : 12/13/89
Tested : 12/13/89 at: 1553

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E				TOTAL MORTALITY
	%	00:00	01:00	24:00	48:00
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
15	0	0	0	0	0
5	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

TOXICITY TEST PARAMETERS

Sample Number: 02890288

TEST CONC. %	E L A P S E D T I M E			
	00:00	01:00	24:00	48:00

100	pH	7.6			7.7
	O2 ppm	9.0			7.5
	Cond.	351			357
	Temp(C)	20.0	20.0	20.0	20.0
60	pH	7.8			7.5
	O2 ppm	9.0			7.1
	Cond.	337			342
	Temp(C)	20.0	20.0	20.0	20.0
30	pH	7.9			7.6
	O2 ppm	9.0			7.3
	Cond.	323			330
	Temp(C)	20.0	20.0	20.0	20.0
15	pH	8.0			7.6
	O2 ppm	9.1			7.3
	Cond.	318			322
	Temp(C)	20.0	20.0	20.0	20.0
5	pH	8.1			7.7
	O2 ppm	9.0			7.5
	Cond.	314			314
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH	8.1			7.7
	O2 ppm	9.1			7.5
	Cond.	312			311
	Temp(C)	20.0	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 06900098

TEST CONDITIONS

Company : Celanese Canada Inc.
Millhaven, ONT
(1730001)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (100)
Laboratory : BEAK
Sampling Method : GRAB
Sampled By : WAYNE SCOTT
Date Collected : 01/16/90
Received : 01/17/90
Tested : 01/17/90 at: 1835
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E			TOTAL MORTALITY
	%	00:00	24:00 48:00	
Control	0	0	0	0
10	0	0	0	0
20	0	0	0	0
30	0	0	0	0
50	0	0	0	0
65	0	0	0	0
100	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : NO MORTALITY OR IMMOBILITY OBSERVED IN 48 HRS

SLOPE of Mortality Curve :
LC50 Calculated By : MOVING AVERAGE

TOXICITY TEST PARAMETERS

Sample Number: 06900098

TEST CONC. %	E L A P S E D T I M E		
		00:00	24:00 48:00

Control	pH	8.0	8.2
	O2 ppm	8.4	8.2
	Cond.	389	384
	Temp(C)	20.0	21.0 20.0
10	pH	8.0	8.1
	O2 ppm	8.3	8.2
	Cond.	402	408
	Temp(C)	20.0	21.0 20.0
20	pH	8.1	8.1
	O2 ppm	8.5	8.0
	Cond.	411	420
	Temp(C)	20.0	21.0 20.0
30	pH	8.0	8.0
	O2 ppm	8.5	7.9
	Cond.	415	429
	Temp(C)	20.0	21.0 20.0
50	pH	8.0	8.0
	O2 ppm	8.6	7.8
	Cond.	424	436
	Temp(C)	20.0	21.0 20.0
65	pH	8.0	8.0
	O2 ppm	8.8	7.6
	Cond.	432	441
	Temp(C)	20.0	21.0 20.0
100	pH	7.9	7.9
	O2 ppm	9.0	7.2
	Cond.	448	458
	Temp(C)	20.0	21.0 20.0

TOXICITY TEST REPORT

Sample: 06900225

TEST CONDITIONS

Company : Celanese Canada Inc.
 Millhaven, ONT
 (1730001)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : BEAK
 Sampling Method : GRAB
 Sampled By : WAYNE SCOTT
 Date Collected : 02/05/90
 Received : 02/06/90
 Tested : 02/07/90 at: 1255
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00 48:00	
100	0	0	0	0
65	0	0	0	0
50	0	0	0	0
30	0	0	0	0
20	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : NO MORTALITY OR IMMOBILITY OBSERVED IN 48 HRS

SLOPE of Mortality Curve :
 LC50 Calculated By : MOVING AVERAGE

TOXICITY TEST PARAMETERS

Sample Number: 06900225

TEST ELAPSED TIME
 CONC. % 00:00 24:00 48:00

100	pH	7.8	8.0
	O2 ppm	9.0	7.4
	Cond.	439	458
	Temp(C)	20.0 21.0	21.0
65	pH	7.8	8.0
	O2 ppm	8.9	7.7
	Cond.	424	442
	Temp(C)	20.0 21.0	21.0
50	pH	7.8	8.0
	O2 ppm	8.9	7.9
	Cond.	416	436
	Temp(C)	20.0 21.0	21.0
30	pH	7.8	8.0
	O2 ppm	8.9	8.1
	Cond.	409	430
	Temp(C)	20.0 21.0	21.0
20	pH	7.8	8.1
	O2 ppm	9.0	8.2
	Cond.	405	427
	Temp(C)	20.0 21.0	21.0
10	pH	7.8	8.1
	O2 ppm	9.0	8.4
	Cond.	402	420
	Temp(C)	20.0 21.0	21.0
Control	pH	7.8	8.0
	O2 ppm	8.9	8.3
	Cond.	396	400
	Temp(C)	20.0 21.0	21.0

TOXICITY TEST REPORT

Sample: 06900336

TEST CONDITIONS

Company : Celanese Canada Inc.
 Millhaven, ONT
 (1730001)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : BEAK
 Sampling Method :
 Sampled By : WAYNE SCOTT
 Date Collected : 03/04/90
 Received : 03/06/90
 Tested : 03/07/90 at: 1530
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E			TOTAL MORTALITY %
	%	00:00	24:00	48:00
100	0	0	0	0
65	0	0	0	0
50	0	0	0	0
30	0	0	0	0
20	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : NO MORTALITY OR IMMOBILITY OBSERVED IN 48 HRS

SLOPE of Mortality Curve :
 LC50 Calculated By : MOVING AVERAGE

TOXICITY TEST PARAMETERS

Sample Number: 06900336

TEST CONC. %	E L A P S E D T I M E		
	00:00	24:00	48:00

100	pH	7.5	7.9
	O2 ppm	7.3	6.4
	Cond.	460	475
	Temp(C)	21.0	22.0
65	pH	7.7	8.0
	O2 ppm	7.4	7.2
	Cond.	445	456
	Temp(C)	21.0	22.0
50	pH	7.8	8.0
	O2 ppm	8.0	7.0
	Cond.	439	447
	Temp(C)	21.0	22.0
30	pH	8.0	8.1
	O2 ppm	8.2	7.4
	Cond.	430	437
	Temp(C)	21.0	22.0
20	pH	8.1	8.1
	O2 ppm	8.4	7.7
	Cond.	425	433
	Temp(C)	21.0	22.0
10	pH	8.2	8.1
	O2 ppm	7.6	7.0
	Cond.	427	425
	Temp(C)	21.0	22.0
Control	pH	8.3	8.2
	O2 ppm	8.0	7.0
	Cond.	420	418
	Temp(C)	21.0	22.0

TOXICITY TEST REPORT

Sample: 06890947

TEST CONDITIONS

Company : Celanese Canada Inc.
 Millhaven, ONT
 (1730001)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (200)
 Laboratory : BEAK
 Sampling Method : 24HR COMPOSITE
 Sampled By : WAYNE SCOTT
 Date Collected : 10/01/89
 Received : 10/02/89
 Tested : 10/03/89 at: 1145
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	1	10
65	0	0	0	0
50	0	0	0	0
30	0	0	0	0
20	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : 10% MORTALITY IN FULL STRENGTH EFFLUENT

SLOPE of Mortality Curve :
 LC50 Calculated By : MOVING AVERAGE

TOXICITY TEST PARAMETERS

Sample Number: 06890947

TEST ELAPSED TIME
 CONC. % 00:00 24:00 48:00

100	pH	8.0	8.3
	O2 ppm	8.8	8.5
	Cond.	332	352
	Temp(C)	20.0	20.0
65	pH	8.1	8.3
	O2 ppm	8.8	8.6
	Cond.	329	350
	Temp(C)	20.0	20.0
50	pH	8.1	8.3
	O2 ppm	9.0	8.6
	Cond.	327	350
	Temp(C)	20.0	20.0
30	pH	8.1	8.3
	O2 ppm	8.8	8.6
	Cond.	326	350
	Temp(C)	20.0	20.0
20	pH	8.1	8.3
	O2 ppm	9.1	8.4
	Cond.	325	347
	Temp(C)	20.0	20.0
10	pH	8.1	8.2
	O2 ppm	8.7	8.4
	Cond.	320	332
	Temp(C)	20.0	20.0
Control	pH	8.0	8.2
	O2 ppm	8.8	8.4
	Cond.	319	341
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 06891046

TEST CONDITIONS

Company : Celanese Canada Inc.
 Millhaven, ONT
 (1730001)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (200)
 Laboratory : BEAK
 Sampling Method : GRAB
 Sampled By : WAYNE SCOTT
 Date Collected : 11/06/89
 Received : 11/06/89
 Tested : 11/06/89 at: 1600
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00 48:00	
Control	0	0	0	0
10	0	0	0	0
20	0	0	0	0
30	0	0	0	0
50	0	0	0	0
65	0	0	0	0
100	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : NO MORTALITY OR IMMOBILITY OBSERVED IN 48 HRS

SLOPE of Mortality Curve :
 LC50 Calculated By : MOVING AVERAGE

TOXICITY TEST PARAMETERS

Sample Number: 06891046

TEST CONC.	ELAPSED TIME		
%	00:00	24:00	48:00

Control	pH	8.1		8.1
	O2 ppm	9.0		8.8
	Cond.	353		346
	Temp(C)	20.0	20.0	20.0
10	pH	8.1		8.1
	O2 ppm	9.1		8.7
	Cond.	374		350
	Temp(C)	20.0	20.0	20.0
20	pH	8.1		8.1
	O2 ppm	9.1		8.6
	Cond.	369		346
	Temp(C)	20.0	20.0	20.0
30	pH	8.1		8.1
	O2 ppm	9.1		8.7
	Cond.	367		343
	Temp(C)	20.0	20.0	20.0
50	pH	8.1		8.1
	O2 ppm	9.4		8.6
	Cond.	362		339
	Temp(C)	20.0	20.0	20.0
65	pH	8.1		8.1
	O2 ppm	9.6		8.5
	Cond.	359		335
	Temp(C)	20.0	20.0	20.0
100	pH	8.1		8.2
	O2 ppm	10.4		8.6
	Cond.	352		330
	Temp(C)	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 06891172

TEST CONDITIONS

Company : Celanese Canada Inc.
Millhaven, ONT
(1730001)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (200)
Laboratory : BEAK
Sampling Method : GRAB
Sampled By : WAYNE SCOTT
Date Collected : 12/04/89
Received : 12/05/89
Tested : 12/05/89 at: 1815
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00 48:00	
Control	0	0	0	0
10	0	0	0	0
20	0	0	0	0
30	0	0	0	0
50	0	0	0	0
65	0	0	0	0
100	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : NO MORTALITY OR IMMOBILITY OBSERVED IN 48 HRS

TOXICITY TEST PARAMETERS

Sample Number: 06891172

TEST CONC. %	ELAPSED TIME		
	00:00	24:00	48:00

Control	pH	8.1	8.1
	O2 ppm	8.5	8.4
	Cond.	374	372
	Temp(C)	20.0	20.0
10	pH	8.1	8.1
	O2 ppm	8.5	8.0
	Cond.	378	379
	Temp(C)	20.0	20.0
20	pH	8.1	8.1
	O2 ppm	8.4	8.1
	Cond.	376	381
	Temp(C)	20.0	20.0
30	pH	8.2	8.0
	O2 ppm	8.5	8.2
	Cond.	373	378
	Temp(C)	20.0	20.0
50	pH	8.1	8.0
	O2 ppm	9.3	8.0
	Cond.	368	374
	Temp(C)	20.0	20.0
65	pH	8.1	8.0
	O2 ppm	9.1	8.0
	Cond.	364	372
	Temp(C)	20.0	20.0
100	pH	8.1	7.9
	O2 ppm	10.2	8.0
	Cond.	353	362
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 02890286

TEST CONDITIONS

Company : Celanese Canada Inc.
 Millhaven, ONT
 (1730001)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (200)
 Laboratory : MOE
 Sampling Method : grab
 Sampled By : A. Verbaas
 Date Collected : 12/11/89
 Received : 12/13/89
 Tested : 12/13/89 at: 1540
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E				TOTAL MORTALITY
%	00:00	01:00	24:00	48:00	%
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
15	0	0	0	0	0
5	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
 LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02890286

TEST CONC. %	E L A P S E D T I M E			
	00:00	01:00	24:00	48:00

100	pH	7.8			7.6
	O2 ppm	10.7			8.0
	Cond.	299			304
	Temp(C)	20.0	20.0	20.0	20.0
60	pH	7.9			7.7
	O2 ppm	9.7			8.0
	Cond.	305			310
	Temp(C)	20.0	20.0	20.0	20.0
30	pH	8.0			7.6
	O2 ppm	9.4			8.0
	Cond.	309			310
	Temp(C)	20.0	20.0	20.0	20.0
15	pH	8.0			7.6
	O2 ppm	9.2			8.1
	Cond.	310			313
	Temp(C)	20.0	20.0	20.0	20.0
5	pH	8.0			7.6
	O2 ppm	9.2			8.2
	Cond.	311			315
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH	8.0			7.5
	O2 ppm	9.1			8.0
	Cond.	308			312
	Temp(C)	20.0	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 06900100

TEST CONDITIONS

Company : Celanese Canada Inc.
Millhaven, ONT
(1730001)
Region : Southeast
Industry : Organic Chemical

Control point : combined effluent, (200)

Laboratory : BEAK
Sampling Method : GRAB
Sampled By : WAYNE SCOTT
Date Collected : 01/16/90
Received : 01/17/90
Tested : 01/17/90 at: 1850

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E			TOTAL MORTALITY
	%	00:00	24:00	48:00
Control	0	0	0	0
10	0	0	0	0
20	0	0	0	0
30	0	0	0	0
50	0	0	0	0
65	0	0	0	0
100	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : NO MORTALITY OR IMMOBILITY OBSERVED IN 48 HRS

TOXICITY TEST PARAMETERS

Sample Number: 06900100

TEST CONC. %	E L A P S E D T I M E		
	00:00	24:00	48:00

Control	pH	8.1	8.2
	O2 ppm	8.4	8.2
	Cond.	388	410
	Temp(C)	20.0	21.0
10	pH	8.1	8.1
	O2 ppm	8.3	8.4
	Cond.	389	387
	Temp(C)	20.0	21.0
20	pH	8.1	8.1
	O2 ppm	8.5	7.6
	Cond.	387	382
	Temp(C)	20.0	21.0
30	pH	8.0	8.0
	O2 ppm	8.5	7.4
	Cond.	381	375
	Temp(C)	20.0	21.0
50	pH	8.1	8.0
	O2 ppm	8.6	7.0
	Cond.	368	361
	Temp(C)	20.0	21.0
65	pH	8.0	8.0
	O2 ppm	8.7	6.9
	Cond.	358	349
	Temp(C)	20.0	21.0
100	pH	8.0	8.0
	O2 ppm	8.8	6.8
	Cond.	335	320
	Temp(C)	20.0	21.0

TOXICITY TEST REPORT

Sample: 06900227

TEST CONDITIONS

Company : Celanese Canada Inc.
Millhaven, ONT
(1730001)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (200)
Laboratory : BEAK
Sampling Method : GRAB
Sampled By : WAYNE SCOTT
Date Collected : 02/05/90
Received : 02/06/90
Tested : 02/07/90 at: 1320
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
65	0	0	0	0
50	0	0	0	0
30	0	0	0	0
20	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : NO MORTALITY OR IMMOBILITY OBSERVED IN 48 HRS

TOXICITY TEST PARAMETERS

Sample Number: 06900227

TEST CONC. %	E L A P S E D T I M E		
	00:00	24:00	48:00

100	pH	8.0	8.1
	O2 ppm	9.8	8.3
	Cond.	327	344
	Temp(C)	20.0	21.0
65	pH	8.0	8.1
	O2 ppm	9.2	8.4
	Cond.	353	370
	Temp(C)	20.0	21.0
50	pH	7.9	8.1
	O2 ppm	9.1	8.4
	Cond.	361	379
	Temp(C)	20.0	21.0
30	pH	7.9	8.1
	O2 ppm	8.9	8.3
	Cond.	375	394
	Temp(C)	20.0	21.0
20	pH	7.9	8.1
	O2 ppm	8.8	8.3
	Cond.	380	402
	Temp(C)	20.0	21.0
10	pH	7.8	8.0
	O2 ppm	8.7	8.1
	Cond.	382	404
	Temp(C)	20.0	21.0
Control	pH	7.9	8.0
	O2 ppm	8.6	8.3
	Cond.	387	400
	Temp(C)	20.0	21.0

TOXICITY TEST REPORT

Sample: 06900338

TEST CONDITIONS

Company : Celanese Canada Inc.
 Millhaven, ONT
 (1730001)
 Region : Southeast
 Industry : Organic Chemical

Control point : combined effluent, (200)

Laboratory : BEAK
 Sampling Method :
 Sampled By : WAYNE SCOTT
 Date Collected : 03/04/90
 Received : 03/06/90
 Tested : 03/07/90 at: 1530

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00 48:00	
100	0	0	0	0
65	0	0	0	0
50	0	0	0	0
30	0	0	0	0
20	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : NO MORTALITY OR IMMOBILITY OBSERVED IN 48 HRS

SLOPE of Mortality Curve :
 LC50 Calculated By : MOVING AVERAGE

TOXICITY TEST PARAMETERS

Sample Number: 06900338

TEST ELAPSED TIME
 CONC. % 00:00 24:00 48:00

100	pH	8.1	8.2
	O2 ppm	7.9	6.8
	Cond.	360	350
	Temp(C)	21.0 22.0	22.0
65	pH	8.2	8.2
	O2 ppm	8.2	7.1
	Cond.	382	378
	Temp(C)	21.0 22.0	22.0
50	pH	8.2	8.2
	O2 ppm	8.5	7.7
	Cond.	390	390
	Temp(C)	21.0 22.0	22.0
30	pH	8.2	8.2
	O2 ppm	8.1	7.5
	Cond.	402	402
	Temp(C)	21.0 22.0	22.0
20	pH	8.2	8.2
	O2 ppm	8.6	7.5
	Cond.	407	410
	Temp(C)	21.0 22.0	22.0
10	pH	8.2	7.9
	O2 ppm	8.2	7.1
	Cond.	403	403
	Temp(C)	21.0 22.0	22.0
Control	pH	8.3	8.2
	O2 ppm	8.0	7.0
	Cond.	420	418
	Temp(C)	21.0 22.0	22.0

TOXICITY TEST REPORT

Sample: 06891050

TEST CONDITIONS

Company : Celanese Canada Inc.
 Millhaven, ONT
 (1730001)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (300)
 Laboratory : BEAK
 Sampling Method : GRAB
 Sampled By : WAYNE SCOTT
 Date Collected : 11/06/89
 Received : 11/06/89
 Tested : 11/06/89 at: 1600
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00	48:00
Control	0	0	0	0
10	0	0	0	0
20	0	0	0	0
30	0	0	0	0
50	0	0	0	0
65	0	0	0	0
100	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : NO MORTALITY OR IMMOBILITY OBSERVED IN 48 HRS

SLOPE of Mortality Curve :
 LC50 Calculated By : MOVING AVERAGE

TOXICITY TEST PARAMETERS

Sample Number: 06891050

TEST ELAPSED TIME
 CONC. % 00:00 24:00 48:00

Control	pH	8.1	8.1
	O2 ppm	9.1	8.5
	Cond.	369	348
	Temp(C)	20.0	20.0
10	pH	8.2	8.1
	O2 ppm	9.1	8.4
	Cond.	351	347
	Temp(C)	20.0	20.0
20	pH	8.2	8.1
	O2 ppm	9.4	8.6
	Cond.	348	345
	Temp(C)	20.0	20.0
30	pH	8.2	8.1
	O2 ppm	9.6	8.6
	Cond.	350	343
	Temp(C)	20.0	20.0
50	pH	8.2	8.1
	O2 ppm	9.8	8.7
	Cond.	354	339
	Temp(C)	20.0	20.0
65	pH	8.2	8.1
	O2 ppm	10.0	8.8
	Cond.	360	336
	Temp(C)	20.0	20.0
100	pH	8.2	8.1
	O2 ppm	10.4	8.6
	Cond.	355	330
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 06891176

TEST CONDITIONS

Company : Celanese Canada Inc.
Millhaven, ONT
(1730001)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (300)
Laboratory : BEAK
Sampling Method : GRAB
Sampled By : WAYNE SCOTT
Date Collected : 12/04/89
Received : 12/05/89
Tested : 12/05/89 at: 1810
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00 48:00	
Control	0	0	0	0
10	0	0	0	0
20	0	0	0	0
30	0	0	0	0
50	0	0	0	0
65	0	0	0	0
100	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : NO MORTALITY OR IMMOBILITY OBSERVED IN 48 HRS

TOXICITY TEST PARAMETERS

Sample Number: 06891176

TEST CONC. %	ELAPSED TIME		
	00:00	24:00	48:00

Control	pH	8.1	7.9
	O2 ppm	8.4	8.3
	Cond.	374	376
	Temp(C)	20.0	20.0
10	pH	8.1	8.1
	O2 ppm	8.6	8.7
	Cond.	378	375
	Temp(C)	20.0	20.0
20	pH	8.1	8.1
	O2 ppm	8.8	8.6
	Cond.	378	384
	Temp(C)	20.0	20.0
30	pH	8.1	8.1
	O2 ppm	8.9	8.5
	Cond.	377	383
	Temp(C)	20.0	20.0
50	pH	8.1	8.1
	O2 ppm	9.2	8.5
	Cond.	371	381
	Temp(C)	20.0	20.0
65	pH	8.1	8.1
	O2 ppm	9.6	8.5
	Cond.	370	380
	Temp(C)	20.0	20.0
100	pH	8.0	8.1
	O2 ppm	10.3	8.5
	Cond.	362	373
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 02890287

TEST CONDITIONS

Company : Celanese Canada Inc.
 Millhaven, ONT
 (1730001)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (300)
 Laboratory : MOE
 Sampling Method : grab
 Sampled By : A. Verbaas
 Date Collected : 12/11/89
 Received : 12/13/89
 Tested : 12/13/89 at: 1546
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E				TOTAL MORTALITY %
	%	00:00	01:00	24:00 48:00	
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
15	0	0	0	0	0
5	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
 LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02890287

TEST CONC. %	E L A P S E D T I M E			
	00:00	01:00	24:00	48:00

100	pH	7.9			7.7
	O2 ppm	11.2			8.0
	Cond.	297			303
	Temp(C)	20.0	20.0	20.0	20.0
60	pH	8.0			7.7
	O2 ppm	9.8			7.9
	Cond.	306			309
	Temp(C)	20.0	20.0	20.0	20.0
30	pH	8.0			7.7
	O2 ppm	9.5			7.9
	Cond.	308			314
	Temp(C)	20.0	20.0	20.0	20.0
15	pH	8.1			7.7
	O2 ppm	9.2			8.0
	Cond.	310			314
	Temp(C)	20.0	20.0	20.0	20.0
5	pH	8.1			7.6
	O2 ppm	9.1			7.8
	Cond.	310			313
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH	8.0			7.8
	O2 ppm	9.1			8.2
	Cond.	310			313
	Temp(C)	20.0	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 06900102

TEST CONDITIONS

Company : Celanese Canada Inc.
 Millhaven, ONT
 (1730001)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (300)
 Laboratory : BEAK
 Sampling Method : GRAB
 Sampled By : WAYNE SCOTT
 Date Collected : 01/16/90
 Received : 01/17/90
 Tested : 01/17/90 at: 1915
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E			TOTAL MORTALITY
	%	00:00	24:00	48:00
Control	0	0	0	0
10	0	0	0	0
20	0	0	0	0
30	0	0	0	0
50	0	0	0	0
65	0	0	0	0
100	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : NO MORTALITY OR IMMOBILITY OBSERVED IN 48 HRS

SLOPE of Mortality Curve :
 LC50 Calculated By : MOVING AVERAGE

TOXICITY TEST PARAMETERS

Sample Number: 06900102

TEST E L A P S E D T I M E
 CONC. % 00:00 24:00 48:00

Control	pH	8.1	8.2
	O2 ppm	8.4	8.2
	Cond.	388	410
	Temp(C)	20.0	21.0
10	pH	8.1	8.2
	O2 ppm	8.4	8.0
	Cond.	392	421
	Temp(C)	20.0	21.0
20	pH	8.1	8.2
	O2 ppm	8.5	8.0
	Cond.	388	393
	Temp(C)	20.0	21.0
30	pH	8.1	8.2
	O2 ppm	8.5	7.8
	Cond.	381	386
	Temp(C)	20.0	21.0
50	pH	8.1	8.2
	O2 ppm	8.6	7.8
	Cond.	369	374
	Temp(C)	20.0	21.0
65	pH	8.0	8.2
	O2 ppm	8.7	7.7
	Cond.	360	367
	Temp(C)	20.0	21.0
100	pH	8.0	8.1
	O2 ppm	9.0	7.6
	Cond.	339	354
	Temp(C)	20.0	21.0

TOXICITY TEST REPORT

Sample: 06900229

TEST CONDITIONS

Company : Celanese Canada Inc.
Millhaven, ONT
(1730001)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (300)
Laboratory : BEAK
Sampling Method : GRAB
Sampled By : WAYNE SCOTT
Date Collected : 02/05/90
Received : 02/06/90
Tested : 02/07/90 at: 1340
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E			TOTAL MORTALITY	
	%	00:00	24:00	48:00	%
100	0	0	0		0
65	0	0	0		0
50	0	0	0		0
30	0	0	0		0
20	0	0	0		0
10	0	0	0		0
Control	0	0	0		0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : NO MORTALITY OR IMMOBILITY OBSERVED IN 48 HRS

TOXICITY TEST PARAMETERS

Sample Number: 06900229

TEST CONC. %	E L A P S E D T I M E		
		00:00	24:00

100	pH	8.0		8.1
	O2 ppm	10.1		8.2
	Cond.	322		342
	Temp(C)	20.0	21.0	21.0
65	pH	8.0		8.1
	O2 ppm	9.6		8.2
	Cond.	349		371
	Temp(C)	20.0	21.0	21.0
50	pH	7.9		8.1
	O2 ppm	9.1		8.3
	Cond.	360		380
	Temp(C)	20.0	21.0	21.0
30	pH	7.9		8.1
	O2 ppm	9.0		8.4
	Cond.	375		383
	Temp(C)	20.0	21.0	21.0
20	pH	7.9		8.1
	O2 ppm	8.9		8.4
	Cond.	381		393
	Temp(C)	20.0	21.0	21.0
10	pH	7.8		8.0
	O2 ppm	8.9		8.1
	Cond.	388		398
	Temp(C)	20.0	21.0	21.0
Control	pH	7.9		8.1
	O2 ppm	8.8		8.4
	Cond.	387		400
	Temp(C)	20.0	21.0	21.0

TOXICITY TEST REPORT

Sample: 06900340

TEST CONDITIONS

Company : Celanese Canada Inc.
Millhaven, ONT
(1730001)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (300)
Laboratory : BEAK
Sampling Method :
Sampled By : WAYNE SCOTT
Date Collected : 03/04/90
Received : 03/06/90
Tested : 03/07/90 at: 1600
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00	48:00
100	0	0	0	0
65	0	0	0	0
50	0	0	0	0
30	0	0	0	0
20	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : NO MORTALITY OR IMMOBILITY OBSERVED IN 48 HRS

TOXICITY TEST PARAMETERS

Sample Number: 06900340

TEST CONC. %	ELAPSED TIME		
	00:00	24:00	48:00

100	pH	8.1	8.2
	O2 ppm	8.8	7.5
	Cond.	347	353
	Temp(C)	21.0	22.0
65	pH	8.1	8.2
	O2 ppm	8.2	7.8
	Cond.	371	374
	Temp(C)	21.0	22.0
50	pH	8.2	8.2
	O2 ppm	8.6	7.9
	Cond.	382	387
	Temp(C)	21.0	22.0
30	pH	8.2	8.2
	O2 ppm	8.5	7.8
	Cond.	398	402
	Temp(C)	21.0	22.0
20	pH	8.3	8.1
	O2 ppm	8.0	7.8
	Cond.	405	409
	Temp(C)	21.0	22.0
10	pH	8.3	8.1
	O2 ppm	8.7	7.9
	Cond.	411	414
	Temp(C)	21.0	22.0
Control	pH	8.3	8.2
	O2 ppm	8.0	7.0
	Cond.	420	418
	Temp(C)	21.0	22.0

COMPANY: Chinook Chemicals Company, Sombra
(5600002)
SECTOR: Organic Chemical
REGION: Southwest

SUMMARY

The data for six trout bioassays, conducted on combined effluent samples collected between October 1989 and March 1990, were provided by Chinook Chemicals Company. Five of six combined effluent samples were determined to have been non-acutely lethal to test fish. The remaining sample produced a 96 hour LC50 of >100 %.

combined effluent

03890220 sampled: 10/17/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03890289 sampled: 11/21/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03890379 sampled: 12/19/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900065 sampled: 01/23/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test

03900131 sampled: 02/20/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test--Non-lethal

03900221 sampled: 03/20/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; Non-lethal

emergency overflow

rain gauge

intake water

Chinook Chemicals Company (continued)

TOXICITY TEST REPORT

Sample: 03890220

TEST CONDITIONS

Company : Chinook Chemicals Company
 Sombra, ONT
 (5600002)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : T. Dawes
 Date Collected : 10/17/89
 Received : 10/18/89
 Tested : 10/18/89 at: 1400
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890220

TEST CONC. %	ELAPSED TIME					
	00:00	04:00	24:00	48:00	72:00	96:00
Control	pH 7.8					8.5
	O2 ppm 8.7					9.4
	Cond. 571					551
	Temp(C) 15.0	15.0	14.0	14.5	14.0	15.0
10	pH 7.8					8.4
	O2 ppm 8.8					9.4
	Cond. 548					536
	Temp(C) 15.0	15.0	14.0	14.5	14.0	15.0
20	pH 7.8					8.3
	O2 ppm 8.9					9.4
	Cond. 535					521
	Temp(C) 15.0	15.0	14.0	14.5	14.0	15.0
40	pH 7.8					8.3
	O2 ppm 9.1					9.4
	Cond. 498					488
	Temp(C) 15.0	15.0	14.0	14.5	14.0	15.0
65	pH 7.9					8.2
	O2 ppm 9.5					9.2
	Cond. 450					441
	Temp(C) 15.0	15.0	14.0	14.5	14.0	15.0
100	pH 8.0					7.9
	O2 ppm 9.9					8.9
	Cond. 376					376
	Temp(C) 15.0	15.0	14.0	14.5	14.0	15.0

TOXICITY TEST REPORT

Sample: 03890289

TEST CONDITIONS

Company : Chinook Chemicals Company
Sombra, ONT
(5600002)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (100)
Laboratory : BAR
Sampling Method : Grab
Sampled By : W. Teft
Date Collected : 11/21/89
Received : 11/22/89
Tested : 11/23/89 at: 1330
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY %
	%	00:00	04:00	24:00	48:00	72:00 96:00	
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	1	10
65	0	0	0	0	0	0	0
100	0	0	0	0	0	1	10

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

TOXICITY TEST PARAMETERS

Sample Number: 03890289

TEST CONC. %	ELAPSED TIME					
		00:00	04:00	24:00	48:00	72:00 96:00
Control	pH	7.2				8.6
	O2 ppm	9.2				9.7
	Cond.	562				567
	Temp(C)	14.5	14.5	14.5	14.5	14.5 14.0
10	pH	7.9				8.6
	O2 ppm	9.1				9.5
	Cond.	538				536
	Temp(C)	14.5	14.5	14.5	14.5	14.5 14.0
20	pH	7.8				8.6
	O2 ppm	9.1				9.6
	Cond.	517				516
	Temp(C)	14.5	14.5	14.5	14.5	14.5 14.0
40	pH	7.8				8.5
	O2 ppm	9.2				9.4
	Cond.	467				473
	Temp(C)	14.5	14.5	14.5	14.5	14.5 14.0
65	pH	7.9				8.5
	O2 ppm	9.3				9.7
	Cond.	409				416
	Temp(C)	14.5	14.5	14.5	14.5	14.5 14.0
100	pH	8.0				8.2
	O2 ppm	9.8				9.3
	Cond.	323				322
	Temp(C)	14.5	14.5	14.5	14.5	14.5 14.0

TOXICITY TEST REPORT

Sample: 03890379

TEST CONDITIONS

Company : Chinook Chemicals Company
Sombra, ONT
(5600002)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (100)
Laboratory : BAR
Sampling Method : Grab
Sampled By : W. Teft
Date Collected : 12/19/89
Received : 12/20/89
Tested : 12/21/89 at: 1700
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

TOXICITY TEST PARAMETERS

Sample Number: 03890379

TEST CONC. %	ELAPSED TIME				
	00:00	24:00	48:00	72:00	96:00
100	pH 7.8				8.0
	O2 ppm 10.5				9.3
	Cond. 961				954
	Temp(C) 15.0	14.0	14.0	14.0	14.0
65	pH 7.8				8.3
	O2 ppm 10.0				9.3
	Cond. 792				804
	Temp(C) 15.0	14.0	14.0	14.0	14.0
40	pH 7.9				8.3
	O2 ppm 9.9				8.3
	Cond. 702				705
	Temp(C) 15.0	14.0	14.0	14.0	14.0
20	pH 7.9				8.3
	O2 ppm 9.6				8.4
	Cond. 624				626
	Temp(C) 15.0	14.0	14.0	14.0	14.0
10	pH 7.9				8.5
	O2 ppm 9.3				9.4
	Cond. 590				585
	Temp(C) 15.0	14.0	14.0	14.0	14.0
5	pH 7.8				8.5
	O2 ppm 9.1				9.7
	Cond. 587				565
	Temp(C) 15.0	14.0	14.0	14.0	14.0
Control	pH 7.8				8.4
	O2 ppm 9.1				8.7
	Cond. 570				537
	Temp(C) 15.0	14.0	14.0	14.0	14.0

TOXICITY TEST REPORT

Sample: 03900065

TEST CONDITIONS

Company : Chinook Chemicals Company
Sombra, ONT
(5600002)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (100)
Laboratory : BAR
Sampling Method : Grab
Sampled By : W. Teft
Date Collected : 01/23/90
Received : 01/24/90
Tested : 01/25/90 at: 1700
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments : Single Concentration Test

TOXICITY TEST PARAMETERS

Sample Number: 03900065

TEST CONC.	E L A P S E D T I M E					
%	00:00	24:00	48:00	72:00	96:00	
100	pH	7.9			7.9	
	O2 ppm	9.1			9.8	
	Cond.	703			710	
	Temp(C)	15.0	14.5	14.5	14.5	15.0
Control	pH	7.9			8.4	
	O2 ppm	8.5			9.8	
	Cond.	545			535	
	Temp(C)	15.0	14.5	14.5	14.5	15.0

MISA Trout

TOXICITY TEST REPORT

Sample: 03900131

TEST CONDITIONS

Company : Chinook Chemicals Company
 Sombra, ONT
 (5600002)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : W. Teft
 Date Collected : 02/20/90
 Received : 02/21/90
 Tested : 02/21/90 at: 1630
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test--Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900131

TEST CONC.	ELAPSED TIME				
%	00:00	24:00	48:00	72:00	96:00
100	pH 7.6				7.6
	O2 ppm 8.6				8.5
	Cond. 1713				1756
	Temp(C) 15.0	14.0	14.5	14.0	14.0
100	pH 7.8				7.5
	O2 ppm 8.6				8.1
	Cond. 1740				1744
	Temp(C) 15.0	14.0	14.5	14.0	14.0
Control	pH 7.8				8.5
	O2 ppm 7.4				10.2
	Cond. 544				518
	Temp(C) 15.0	14.0	14.5	14.0	14.0
Control	pH 7.8				8.5
	O2 ppm 7.8				10.2
	Cond. 543				522
	Temp(C) 15.0	14.0	14.5	14.0	14.0

TOXICITY TEST REPORT

Sample: 03900221

TEST CONDITIONS

Company : Chinook Chemicals Company
Sombra, ONT
(5600002)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (100)
Laboratory : BAR
Sampling Method : Grab
Sampled By : W. Teft
Date Collected : 03/20/90
Received : 03/21/90
Tested : 03/21/90 at: 1400
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test; Non-lethal

TOXICITY TEST PARAMETERS

Sample Number: 03900221

TEST CONC. %	E L A P S E D T I M E					
		00:00	24:00	48:00	72:00	96:00
100	pH	7.6				8.0
	O2 ppm	10.5				9.2
	Cond.	518				524
	Temp(C)	15.0	14.5	14.5	14.5	14.5
100	pH	7.6				8.0
	O2 ppm	10.5				9.3
	Cond.	518				523
	Temp(C)	15.0	14.5	14.5	14.5	14.5
Control	pH	7.9				8.4
	O2 ppm	8.4				9.4
	Cond.	551				551
	Temp(C)	15.0	14.5	14.5	14.5	14.5
Control	pH	7.9				8.4
	O2 ppm	8.4				9.4
	Cond.	554				547
	Temp(C)	15.0	14.5	14.5	14.5	14.5

COMPANY: Chinook Chemicals Company, Sombra
(5600002)
SECTOR: Organic Chemical
REGION: Southwest

SUMMARY

Results for six *Daphnia magna* acute lethality toxicity tests conducted on samples of combined effluent collected between October 1989 and March 1990 were submitted by Chinook Chemicals Company of Sombra. The toxicity of the effluent samples was variable. Three samples were not acutely lethal to *Daphnia*, two samples had LC50s greater than 100%, and one sample had an LC50 of 17.1%.

combined effluent

03890220 sampled: 10/17/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03890289 sampled: 11/21/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03890379 sampled: 12/19/89 LC50: 17.1 %
95% fid. limits: 13.0 - 22.5 % slope: 4.4
comments: Lethal

03900065 sampled: 01/23/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900131 sampled: 02/20/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900221 sampled: 03/20/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

emergency overflow

rain gauge

intake water

Chinook Chemicals Company (continued)

TOXICITY TEST REPORT

Sample: 03890220

TEST CONDITIONS

Company : Chinook Chemicals Company
 Sombra, ONT
 (5600002)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : T. Dawes
 Date Collected : 10/17/89
 Received : 10/18/89
 Tested : 10/18/89 at: 1545
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	%
Control	0	0	0	0	0
6	0	0	0	1	8
13	0	0	0	1	8
25	0	0	0	1	8
50	0	0	1	1	8
100	0	0	1	1	8

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890220

TEST ELAPSED TIME
 CONC. 00:00 04:00 24:00 48:00
 %

Control	pH	8.4			8.3
	O2 ppm	8.7			9.3
	Cond.	296			302
	Temp(C)	20.5	20.0	19.5	20.0
6	pH	8.4			8.3
	O2 ppm	8.5			8.7
	Cond.	302			308
	Temp(C)	20.5	20.0	19.5	20.0
13	pH	8.3			8.3
	O2 ppm	8.6			9.0
	Cond.	303			304
	Temp(C)	20.5	20.0	19.5	20.0
25	pH	8.3			8.2
	O2 ppm	8.7			9.0
	Cond.	312			311
	Temp(C)	20.5	20.0	19.5	20.0
50	pH	8.2			8.2
	O2 ppm	8.9			9.0
	Cond.	328			328
	Temp(C)	20.5	20.0	19.5	20.0
100	pH	8.0			8.1
	O2 ppm	9.3			8.9
	Cond.	364			364
	Temp(C)	20.5	20.0	19.5	20.0

TOXICITY TEST REPORT

Sample: 03890289

TEST CONDITIONS

Company : Chinook Chemicals Company
 Sombra, ONT
 (5600002)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : W. Teft
 Date Collected : 11/21/89
 Received : 11/22/89
 Tested : 11/22/89 at: 1415
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	%
Control	0	0	0	0	0
6	0	0	0	0	0
13	0	0	0	0	0
25	0	0	0	0	0
50	0	0	0	0	0
100	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890289

TEST CONC. %	ELAPSED TIME			
	00:00	04:00	24:00	48:00

Control	pH	8.5			8.2
	O2 ppm	9.1			10.2
	Cond.	293			315
	Temp(C)	19.5	19.5	20.0	20.0
6	pH	8.3			8.2
	O2 ppm	9.3			9.9
	Cond.	305			309
	Temp(C)	19.5	19.5	20.0	20.0
13	pH	8.3			8.3
	O2 ppm	9.1			9.7
	Cond.	306			306
	Temp(C)	19.5	19.5	20.0	20.0
25	pH	8.2			8.2
	O2 ppm	9.3			9.5
	Cond.	306			309
	Temp(C)	19.5	19.5	20.0	20.0
50	pH	8.2			8.2
	O2 ppm	9.5			9.3
	Cond.	308			311
	Temp(C)	19.5	19.5	20.0	20.0
100	pH	8.0			8.1
	O2 ppm	10.1			9.1
	Cond.	313			313
	Temp(C)	19.5	19.5	20.0	20.0

TOXICITY TEST REPORT

Sample: 03890379

TEST CONDITIONS

Company : Chinook Chemicals Company
Sombra, ONT
(5600002)
Region : Southwest
Industry : Organic Chemical

Control point : combined effluent, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : W. Teft
Date Collected : 12/19/89
Received : 12/20/89
Tested : 12/21/89 at: 1510

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00 48:00	
100	0	12	12	100
50	0	12	12	100
25	0	9	11	91
13	0	0	2	16
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : 17.1 %

95% fid. limits : 13.0 - 22.5 %

Comments : Lethal

TOXICITY TEST PARAMETERS

Sample Number: 03890379

TEST CONC.	ELAPSED TIME		
%	00:00	24:00	48:00

100	pH	7.9	7.9
	O2 ppm	10.3	8.9
	Cond.	921	925
	Temp(C)	19.5	19.5
50	pH	8.1	8.1
	O2 ppm	9.7	8.4
	Cond.	625	619
	Temp(C)	19.5	19.5
25	pH	8.3	8.3
	O2 ppm	9.8	8.8
	Cond.	461	468
	Temp(C)	19.5	19.5
13	pH	8.2	8.3
	O2 ppm	9.3	8.6
	Cond.	390	383
	Temp(C)	19.5	19.5
6	pH	8.4	8.3
	O2 ppm	9.9	8.5
	Cond.	345	344
	Temp(C)	19.5	19.5
Control	pH	8.4	8.4
	O2 ppm	9.6	8.9
	Cond.	308	310
	Temp(C)	19.5	19.5

TOXICITY TEST REPORT

Sample: 03900065

TEST CONDITIONS

Company : Chinook Chemicals Company
 Sombra, ONT
 (5600002)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : W. Teft
 Date Collected : 01/23/90
 Received : 01/24/90
 Tested : 01/25/90 at: 1110
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E			TOTAL MORTALITY
	%	00:00	24:00	48:00
100	0	0	0	0
50	0	0	1	8
25	0	0	1	8
13	0	2	2	16
6	0	1	1	8
Control	0	0	1	8

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900065

TEST CONC. %	E L A P S E D T I M E		
	00:00	24:00	48:00

100	pH	7.9	8.0
	O2 ppm	9.2	8.1
	Cond.	687	675
	Temp(C)	20.0	20.0
50	pH	8.3	8.2
	O2 ppm	9.1	8.2
	Cond.	491	489
	Temp(C)	20.0	20.0
25	pH	8.4	8.3
	O2 ppm	8.8	8.2
	Cond.	400	398
	Temp(C)	20.0	20.0
13	pH	8.4	8.4
	O2 ppm	8.8	8.1
	Cond.	351	349
	Temp(C)	20.0	20.0
6	pH	8.4	8.4
	O2 ppm	8.8	8.1
	Cond.	324	324
	Temp(C)	20.0	20.0
Control	pH	8.5	8.4
	O2 ppm	8.7	8.2
	Cond.	299	300
	Temp(C)	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT

Sample: 03900131

TEST CONDITIONS

Company : Chinook Chemicals Company
 Sombra, ONT
 (5600002)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : W. Teft
 Date Collected : 02/20/90
 Received : 02/21/90
 Tested : 02/21/90 at: 1350
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900131

TEST CONC. %	ELAPSED TIME		
	00:00	24:00	48:00

100	pH	7.6	7.2
	O2 ppm	8.7	3.6
	Cond.	1732	1700
	Temp(C)	19.5	20.0
50	pH	8.0	7.5
	O2 ppm	8.6	4.4
	Cond.	1038	1025
	Temp(C)	19.5	20.0
25	pH	8.2	7.7
	O2 ppm	8.6	5.7
	Cond.	688	667
	Temp(C)	19.5	20.0
13	pH	8.3	7.9
	O2 ppm	8.6	7.2
	Cond.	510	498
	Temp(C)	19.5	20.0
6	pH	8.3	8.1
	O2 ppm	8.6	8.0
	Cond.	405	390
	Temp(C)	19.5	20.0
Control	pH	8.4	8.3
	O2 ppm	8.6	8.6
	Cond.	305	304
	Temp(C)	19.5	20.0

TOXICITY TEST REPORT

Sample: 03900221

TEST CONDITIONS

Company : Chinook Chemicals Company
 Sombra, ONT
 (5600002)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : W. Teft
 Date Collected : 03/20/90
 Received : 03/21/90
 Tested : 03/21/90 at: 1430
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY %
	%	00:00	24:00	
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900221

TEST CONC. %	ELAPSED TIME		
	00:00	24:00	48:00

100	pH	7.6	7.4
	O2 ppm	8.2	4.0
	Cond.	511	488
	Temp(C)	20.0	20.0
50	pH	7.8	7.5
	O2 ppm	8.6	4.9
	Cond.	410	399
	Temp(C)	20.0	20.0
25	pH	7.9	7.7
	O2 ppm	8.9	6.5
	Cond.	363	359
	Temp(C)	20.0	20.0
13	pH	7.9	7.9
	O2 ppm	9.0	7.6
	Cond.	337	334
	Temp(C)	20.0	20.0
6	pH	7.9	8.0
	O2 ppm	9.0	8.2
	Cond.	326	320
	Temp(C)	20.0	20.0
Control	pH	8.0	8.2
	O2 ppm	8.9	8.5
	Cond.	311	306
	Temp(C)	20.0	20.0

COMPANY: Cornwall Chemicals Limited, Cornwall
(33050006)
SECTOR: Organic Chemical
REGION: Southeast

SUMMARY

The data for seven trout bioassays, conducted on process effluent samples collected between October 1989 and March 1990, were provided by Cornwall Chemicals Limited. Four of the samples, collected from control point 0100, were determined to have been acutely lethal to test fish. Statistically, the percentage effluent required to kill 50 % of the test fish by the end of the four days exposure were 57.0 % (October), 80.6 % (December), 16.7 % (January), and 84.4 % (February). The remaining three samples were determined to have been non-acutely lethal to test fish.

process effluent

06890964 sampled: 10/02/89 LC50: 57.0 %
95% fid. limits: 65.0 - 50.0 %
comments: pH DECREASED IN 50&65% CONC. DURING 72&96 HRS

06891053 sampled: 11/06/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

06891181 sampled: 12/05/89 LC50: 80.6 %
95% fid. limits: 65.0 - 100.0 %
comments: 100% MORTALITY IN FULL STRENGTH EFFLUENT

06900028 sampled: 01/08/90 LC50: 16.7 %
95% fid. limits: 19.6 - 14.2 %
comments: 70% MORTALITY IN 20% CONCENTRATION.

06900025 sampled: 01/08/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

06900220 sampled: 02/05/90 LC50: 84.4 %
95% fid. limits: 0.0 - 0.0 %
comments: 90% MORTALITY IN FULL STRENGTH EFFLUENT

06900343 sampled: 03/05/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

Cornwall Chemicals Limited (continued)

rain gauge

intake water

TOXICITY TEST REPORT

Sample: 06890964

TEST CONDITIONS

Company : Cornwall Chemicals Limited
 Cornwall, ONT
 (33050006)
 Region : Southeast
 Industry : Organic Chemical
 Control point : process effluent, (100)
 Laboratory : BEAK
 Sampling Method : GRAB
 Sampled By : BUD O'BRIEN
 Date Collected : 10/02/89
 Received : 10/05/89
 Tested : 10/05/89 at: 1100
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	10	10	10	10	100
65	0	0	0	0	10	100
50	0	0	0	0	0	0
30	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : 57.0 %

95% fid. limits : 65.0 - 50.0 %

Comments : pH DECREASED IN 50&65% CONC. DURING 72&96 HRS

SLOPE of Mortality Curve :
 LC50 Calculated By : BINOMIAL

TOXICITY TEST PARAMETERS

Sample Number: 06890964

TEST ELAPSED TIME
 CONC. % 00:00 24:00 48:00 72:00 96:00

100	pH	5.4	5.7			
	O2 ppm	7.2	8.5			
	Cond.	964				
	Temp(C)	15.0	15.0			
65	pH	6.2	6.9	6.5	4.1	3.8
	O2 ppm	7.8	7.9	7.8	10.0	10.2
	Cond.	824				939
	Temp(C)	15.0	15.0	15.0	15.0	15.0
50	pH	6.5	6.9	7.0	3.8	3.8
	O2 ppm	8.2	6.8	8.9	9.1	9.7
	Cond.	698				796
	Temp(C)	15.0	15.0	15.0	15.0	15.0
30	pH	6.8	7.7	7.8	7.5	7.4
	O2 ppm	8.5	8.4	9.0	10.0	9.7
	Cond.	585				597
	Temp(C)	15.0	15.0	15.0	15.0	15.0
20	pH	6.9	7.7	7.8	7.5	7.5
	O2 ppm	9.4	8.7	8.2	9.9	9.7
	Cond.	507				524
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.2	7.8	7.9	7.6	7.7
	O2 ppm	9.5	8.5	8.3	9.8	9.5
	Cond.	439				447
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.4	7.9	7.9	7.4	7.7
	O2 ppm	9.6	8.3	8.3	9.6	9.6
	Cond.	385				375
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 06891053

TEST CONDITIONS

Company : Cornwall Chemicals Limited
 Cornwall, ONT
 (33050006)
 Region : Southeast
 Industry : Organic Chemical
 Control point : process effluent, (100)
 Laboratory : BEAK
 Sampling Method : GRAB
 Sampled By : BUD O'BRIEN
 Date Collected : 11/06/89
 Received : 11/08/89
 Tested : 11/08/89 at: 1400
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY	
	%	00:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

SLOPE of Mortality Curve :
LC50 Calculated By : MOVING AVERAGE

TOXICITY TEST PARAMETERS

Sample Number: 06891053

TEST CONC. %	E L A P S E D T I M E				
	00:00	24:00	48:00	72:00	96:00

Control	pH	8.2	8.4	8.0	7.8	8.1
	O2 ppm	7.6	9.5	8.2	8.1	9.5
	Cond.	317				325
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	8.3	8.3	7.9	7.9	8.0
	O2 ppm	8.8	8.5	8.4	7.8	9.2
	Cond.	381				386
	Temp(C)	15.0	15.0	15.0	15.0	15.0
20	pH	8.3	8.2	7.8	7.8	8.0
	O2 ppm	9.7	9.1	8.4	8.6	9.4
	Cond.	434				442
	Temp(C)	15.0	15.0	15.0	15.0	15.0
30	pH	8.2	8.2	7.7	7.7	8.0
	O2 ppm	9.7	9.2	8.2	8.0	9.6
	Cond.	486				494
	Temp(C)	15.0	15.0	15.0	15.0	15.0
50	pH	8.2	8.1	7.8	7.7	7.8
	O2 ppm	10.2	7.0	8.1	7.8	8.4
	Cond.	570				586
	Temp(C)	15.0	15.0	15.0	15.0	15.0
65	pH	8.1	8.1	7.8	7.7	7.8
	O2 ppm	9.7	7.5	7.7	8.2	9.2
	Cond.	657				678
	Temp(C)	15.0	15.0	15.0	15.0	15.0
100	pH	8.1	8.1	7.8	7.7	7.8
	O2 ppm	9.9	8.7	8.0	8.3	8.8
	Cond.	815				842
	Temp(C)	15.0	15.0	15.0	15.0	15.0

MISA Trout

TOXICITY TEST REPORT

Sample: 06891181

TEST CONDITIONS

Company : Cornwall Chemicals Limited
 Cornwall, ONT
 (33050006)
 Region : Southeast
 Industry : Organic Chemical
 Control point : process effluent, (100)
 Laboratory : BEAK
 Sampling Method : GRAB
 Sampled By : BUD O'BRIEN
 Date Collected : 12/05/89
 Received : 12/05/89
 Tested : 12/05/89 at: 1900
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0
10	0	0	0	0	0	0
20	0	0	0	0	0	0
30	0	0	0	0	0	0
50	0	0	0	0	0	0
65	0	0	0	0	0	0
100	0	10	10	10	10	100

96 Hour LC50 : 80.6 %

95% fid. limits : 65.0 - 100.0 %

Comments : 100% MORTALITY IN FULL STRENGTH EFFLUENT

SLOPE of Mortality Curve :
 LC50 Calculated By : BINOMIAL

TOXICITY TEST PARAMETERS

Sample Number: 06891181

TEST ELAPSED TIME
 CONC. % 00:00 24:00 48:00 72:00 96:00

Control	pH	8.0	7.6	7.7	8.0	8.0
	O2 ppm	9.2	8.3	8.2	8.7	8.7
	Cond.	422				367
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.8	7.8	7.9	8.0	8.0
	O2 ppm	8.7	8.6	8.8	9.1	8.8
	Cond.	800				670
	Temp(C)	15.0	15.0	15.0	15.0	15.0
20	pH	8.0	7.8	7.9	8.0	8.0
	O2 ppm	8.5	8.1	9.0	8.2	8.2
	Cond.	965				960
	Temp(C)	15.0	15.0	15.0	15.0	15.0
30	pH	8.0	7.7	8.0	8.0	7.9
	O2 ppm	8.4	8.3	9.2	8.7	8.8
	Cond.	1232				1262
	Temp(C)	15.0	15.0	15.0	15.0	15.0
50	pH	8.1	7.9	7.9	7.9	7.7
	O2 ppm	8.5	8.3	8.8	8.6	8.2
	Cond.	1648				1756
	Temp(C)	15.0	15.0	15.0	15.0	15.0
65	pH	8.5	7.8	7.7	8.0	7.9
	O2 ppm	8.7	8.4	8.2	8.1	8.0
	Cond.	2860				2180
	Temp(C)	15.0	15.0	15.0	15.0	15.0
100	pH	8.5	8.0			
	O2 ppm	8.9	8.3			
	Cond.	3420	3190			
	Temp(C)	15.0	15.0			

TOXICITY TEST REPORT

Sample: 06900028

TEST CONDITIONS

Company : Cornwall Chemicals Limited
 Cornwall, ONT
 (33050006)
 Region : Southeast
 Industry : Organic Chemical
 Control point : process effluent, (100)
 Laboratory : BEAK
 Sampling Method : GRAB
 Sampled By : F. O'BRIEN
 Date Collected : 01/08/90
 Received : 01/09/90
 Tested : 01/09/90 at: 2030
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E			TOTAL MORTALITY
%	00:00	24:00	48:00	%
Control	0	0	0	0
10	0	0	0	0
20	0	1	7	70
30	0	2	10	100
50	0	10	10	100
65	0	10	10	100
100	0	10	10	100

48 Hour LC50 : 16.7 %

95% fid. limits : 19.6 - 14.2 %

Comments : 70% MORTALITY IN 20% CONCENTRATION.

SLOPE of Mortality Curve :
 LC50 Calculated By : SPEARMAN-KARBER

TOXICITY TEST PARAMETERS

Sample Number: 06900028

TEST CONC. %	E L A P S E D T I M E		
	00:00	24:00	48:00

Control	pH	8.0	8.1
	O2 ppm	8.7	9.1
	Cond.	350	379
	Temp(C)	20.0	21.0
10	pH	7.8	8.1
	O2 ppm	9.4	8.5
	Cond.	780	586
	Temp(C)	20.0	21.0
20	pH	7.6	7.7
	O2 ppm	9.4	7.0
	Cond.	800	762
	Temp(C)	20.0	21.0
30	pH	7.4	7.2
	O2 ppm	9.3	2.3
	Cond.	969	985
	Temp(C)	20.0	21.0
50	pH	7.2	7.0
	O2 ppm	9.4	1.0
	Cond.	1329	1406
	Temp(C)	20.0	21.0
65	pH	7.0	7.0
	O2 ppm	9.5	0.8
	Cond.	1670	1721
	Temp(C)	20.0	21.0
100	pH	6.8	6.9
	O2 ppm	9.8	0.8
	Cond.	2330	2420
	Temp(C)	20.0	21.0

TOXICITY TEST REPORT

Sample: 06900025

TEST CONDITIONS

Company : Cornwall Chemicals Limited
 Cornwall, ONT
 (33050006)
 Region : Southeast
 Industry : Organic Chemical
 Control point : process effluent, (100)
 Laboratory : BEAK
 Sampling Method : GRAB
 Sampled By : F. O'BRIEN
 Date Collected : 01/08/90
 Received : 01/09/90
 Tested : 01/09/90 at: 1830
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0
10	0	0	0	0	0	0
20	0	0	0	0	0	0
30	0	0	0	0	0	0
50	0	0	0	0	0	0
65	0	0	0	0	0	0
100	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

SLOPE of Mortality Curve :
 LC50 Calculated By : MOVING AVERAGE

TOXICITY TEST PARAMETERS

Sample Number: 06900025

TEST ELAPSED TIME
 CONC. % 00:00 24:00 48:00 72:00 96:00

Control	pH	7.7	7.9	7.9	7.8	7.9
	O2 ppm	8.7	8.4	8.4	9.6	9.5
	Cond.	348				356
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.4	7.5	7.7	7.7	7.2
	O2 ppm	8.7	8.2	8.4	9.6	7.8
	Cond.	534				561
	Temp(C)	15.0	15.0	15.0	15.0	15.0
20	pH	7.3	7.6	7.7	7.6	7.2
	O2 ppm	10.2	8.4	8.5	9.7	8.1
	Cond.	713				789
	Temp(C)	15.0	15.0	15.0	15.0	15.0
30	pH	7.2	7.5	7.7	7.5	7.2
	O2 ppm	10.7	8.6	8.7	9.4	8.0
	Cond.	969				1001
	Temp(C)	15.0	15.0	15.0	15.0	15.0
50	pH	7.0	7.6	7.8	7.4	7.2
	O2 ppm	10.8	8.7	9.2	9.3	8.1
	Cond.	1389				1458
	Temp(C)	15.0	15.0	15.0	15.0	15.0
65	pH	6.9	7.2	7.7	7.2	7.0
	O2 ppm	10.8	8.9	9.1	9.4	7.7
	Cond.	1566				1707
	Temp(C)	15.0	15.0	15.0	15.0	15.0
100	pH	6.7	7.0	7.3	7.1	6.8
	O2 ppm	9.7	8.7	8.7	9.1	7.0
	Cond.	2260				2880
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 06900220

TEST CONDITIONS

Company : Cornwall Chemicals Limited
Cornwall, ONT
(33050006)
Region : Southeast
Industry : Organic Chemical
Control point : process effluent, (100)
Laboratory : BEAK
Sampling Method : GRAB
Sampled By : BUD O'BRIEN
Date Collected : 02/05/90
Received : 02/06/90
Tested : 02/07/90 at: 1100
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY %
	%	00:00	24:00	48:00	72:00	96:00
100	0	7	8	8	9	90
65	0	0	0	0	0	0
50	0	0	0	0	0	0
30	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : 84.4 %

95% fid. limits : 0.0 - 0.0 %

Comments : 90% MORTALITY IN FULL STRENGTH EFFLUENT

TOXICITY TEST PARAMETERS

Sample Number: 06900220

TEST CONC. %	ELAPSED TIME				
	00:00	24:00	48:00	72:00	96:00

100	pH	5.6	5.9	5.8	5.8	5.8
	O2 ppm	9.9	9.3	8.5	8.6	9.3
	Cond.	2150				1545
	Temp(C)	15.0	15.0	15.0	15.0	15.0
65	pH	6.3	6.7	6.7	6.6	6.5
	O2 ppm	9.8	8.9	8.9	8.7	9.2
	Cond.	1491				1315
	Temp(C)	15.0	15.0	15.0	15.0	15.0
50	pH	6.4	6.8	6.9	6.9	6.8
	O2 ppm	9.6	8.4	8.5	8.8	8.9
	Cond.	1266				937
	Temp(C)	15.0	15.0	15.0	15.0	15.0
30	pH	6.8	7.6	7.7	7.7	7.8
	O2 ppm	9.4	8.9	8.6	8.9	9.1
	Cond.	904				757
	Temp(C)	15.0	15.0	15.0	15.0	15.0
20	pH	6.9	7.8	7.9	7.9	7.9
	O2 ppm	9.6	9.2	8.8	9.0	9.0
	Cond.	733				578
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.1	8.0	8.0	7.9	8.0
	O2 ppm	9.5	9.3	9.0	9.1	8.7
	Cond.	571				415
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.7	8.1	8.2	8.0	8.1
	O2 ppm	9.8	9.3	9.0	8.9	9.0
	Cond.	382				410
	Temp(C)	15.0	15.0	15.0	15.0	15.0

MISA Trout

TOXICITY TEST REPORT

Sample: 06900343

TEST CONDITIONS

Company : Cornwall Chemicals Limited
 Cornwall, ONT
 (33050006)
 Region : Southeast
 Industry : Organic Chemical
 Control point : process effluent, (100)
 Laboratory : BEAK
 Sampling Method : GRAB
 Sampled By : BUD O'BRIEN
 Date Collected : 03/05/90
 Received : 03/06/90
 Tested : 03/07/90 at: 1600
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
	%	00:00	24:00	48:00	72:00	96:00
100	0	0	0	0	0	0
65	0	0	0	0	0	0
50	0	0	0	0	0	0
30	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

SLOPE of Mortality Curve :
 LC50 Calculated By : MOVING AVERAGE

TOXICITY TEST PARAMETERS

Sample Number: 06900343

TEST CONC. %		E L A P S E D T I M E				
		00:00	24:00	48:00	72:00	96:00
100	pH	5.8	6.3	6.1	6.2	5.8
	O2 ppm	9.2	9.7	8.3	10.6	8.9
	Cond.	8150				7910
	Temp(C)	15.0	15.0	15.0	15.0	15.0
65	pH	6.5	7.3	7.2	7.2	6.9
	O2 ppm	9.6	9.8	8.8	10.2	9.0
	Cond.	5090				5330
	Temp(C)	15.0	15.0	15.0	15.0	15.0
50	pH	6.7	7.6	7.4	7.5	7.3
	O2 ppm	9.6	9.6	8.5	10.0	8.6
	Cond.	3950				4180
	Temp(C)	15.0	15.0	15.0	15.0	15.0
30	pH	7.0	7.7	7.6	7.7	7.5
	O2 ppm	9.6	9.7	8.4	10.0	9.2
	Cond.	2600				2790
	Temp(C)	15.0	15.0	15.0	15.0	15.0
20	pH	7.2	8.0	7.8	7.9	7.8
	O2 ppm	9.6	9.5	8.5	10.2	9.8
	Cond.	1906				1972
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.4	8.1	7.9	7.9	7.9
	O2 ppm	9.3	9.6	8.7	10.0	9.8
	Cond.	1224				1200
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.8	8.1	8.1	7.9	7.9
	O2 ppm	8.3	9.2	9.2	10.0	10.0
	Cond.	416				402
	Temp(C)	15.0	15.0	15.0	15.0	15.0

COMPANY: Cornwall Chemicals Limited, Cornwall
(33050006)
SECTOR: Organic Chemical
REGION: Southeast

SUMMARY

Results for six Daphnia magna acute lethality toxicity tests conducted on samples of process effluent collected between October 1989 and March 1990 were submitted by Cornwall Chemicals Limited of Sarnia. All six samples were toxic to Daphnia with LC50 values ranging between 14 and 61% effluent.

process effluent

06890965 sampled: 10/02/89 LC50: 39.0 %
95% fid. limits: 30.0 - 50.0 %
comments: 100% MORTALITY IN 50% CONCENTRATION

06891054 sampled: 11/06/89 LC50: 93.3 %
95% fid. limits: 75.7 - 178.8 %
comments: 60% MORTALITY IN FULL STRENGTH EFFLUENT

06891182 sampled: 12/05/89 LC50: 14.0 %
95% fid. limits: 10.0 - 20.0 %
comments: 100% MORTALITY IN 20% CONCENTRATION

06900028 sampled: 01/08/90 LC50: 16.7 %
95% fid. limits: 14.2 - 19.6 %
comments: 70 % MORTALITY IN 20 % CONCENTRATION

06900221 sampled: 02/05/90 LC50: 33.8 %
95% fid. limits: 29.5 - 38.5 %
comments: 100% MORTALITY IN 50% TEST CONCENTRATION

06900344 sampled: 03/05/90 LC50: 29.4 %
95% fid. limits: 25.5 - 33.9 %
comments: 60% MORTALITY IN 30% TEST CONCENTRATION

rain gauge

intake water

TOXICITY TEST REPORT

Sample: 06890965

TEST CONDITIONS

Company : Cornwall Chemicals Limited
 Cornwall, ONT
 (33050006)
 Region : Southeast
 Industry : Organic Chemical
 Control point : process effluent, (100)
 Laboratory : BEAK
 Sampling Method : GRAB
 Sampled By : BUD O'BRIEN
 Date Collected : 10/02/89
 Received : 10/05/89
 Tested : 10/05/89 at: 1550
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E			TOTAL MORTALITY
	%	00:00	24:00	48:00
100	0	10	10	100
65	0	0	10	100
50	0	0	10	100
30	0	0	0	0
20	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : 39.0 %

95% fid. limits : 30.0 - 50.0 %

Comments : 100% MORTALITY IN 50% CONCENTRATION

SLOPE of Mortality Curve :
 LC50 Calculated By : BINOMIAL

TOXICITY TEST PARAMETERS

Sample Number: 06890965

TEST CONC. %	E L A P S E D T I M E		
	00:00	24:00	48:00

100	pH	5.4	4.2
	O2 ppm	6.4	7.6
	Cond.	1027	981
	Temp(C)	21.0	21.0
65	pH	6.3	4.0
	O2 ppm	7.5	6.2
	Cond.	784	800
	Temp(C)	21.0	21.0
50	pH	6.5	4.0
	O2 ppm	7.8	4.0
	Cond.	685	695
	Temp(C)	21.0	21.0
30	pH	6.8	6.9
	O2 ppm	8.2	3.7
	Cond.	553	548
	Temp(C)	21.0	21.0
20	pH	7.0	7.6
	O2 ppm	8.6	6.8
	Cond.	487	469
	Temp(C)	21.0	21.0
10	pH	7.3	8.2
	O2 ppm	8.6	8.9
	Cond.	420	404
	Temp(C)	21.0	21.0
Control	pH	8.0	8.1
	O2 ppm	9.1	8.9
	Cond.	332	305
	Temp(C)	21.0	21.0

TOXICITY TEST REPORT

Sample: 06891054

TEST CONDITIONS

Company : Cornwall Chemicals Limited
Cornwall, ONT
(33050006)
Region : Southeast
Industry : Organic Chemical
Control point : process effluent, (100)
Laboratory : BEAK
Sampling Method : GRAB
Sampled By : BUD O'BRIEN
Date Collected : 11/06/89
Received : 11/08/89
Tested : 11/08/89 at: 1430
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00	48:00
100	0	6	6	60
65	0	0	1	10
50	0	0	1	10
30	0	0	0	0
20	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : 93.3 %

95% fid. limits : 75.7 - 178.8 %

Comments : 60% MORTALITY IN FULL STRENGTH EFFLUENT

TOXICITY TEST PARAMETERS

Sample Number: 06891054

TEST CONC.	ELAPSED TIME		
%	00:00	24:00	48:00

100	pH	7.4	7.9
	O2 ppm	9.5	8.6
	Cond.	786	873
	Temp(C)	20.0	20.0
65	pH	7.5	7.9
	O2 ppm	9.2	8.5
	Cond.	617	702
	Temp(C)	20.0	20.0
50	pH	7.7	7.9
	O2 ppm	9.0	8.3
	Cond.	590	621
	Temp(C)	20.0	20.0
30	pH	7.8	7.9
	O2 ppm	8.8	8.2
	Cond.	512	531
	Temp(C)	20.0	20.0
20	pH	7.9	8.0
	O2 ppm	8.9	8.5
	Cond.	462	482
	Temp(C)	20.0	20.0
10	pH	7.9	8.0
	O2 ppm	8.9	8.2
	Cond.	411	422
	Temp(C)	20.0	20.0
Control	pH	8.0	7.8
	O2 ppm	8.7	8.0
	Cond.	364	364
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 06891182

TEST CONDITIONS

Company : Cornwall Chemicals Limited
 Cornwall, ONT
 (33050006)
 Region : Southeast
 Industry : Organic Chemical
 Control point : process effluent, (100)
 Laboratory : BEAK
 Sampling Method : GRAB
 Sampled By : BUD O'BRIEN
 Date Collected : 12/05/89
 Received : 12/05/89
 Tested : 12/06/89 at: 900
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E			TOTAL MORTALITY
%	00:00	24:00	48:00	%
Control	0	0	0	0
10	0	0	0	0
20	0	10	10	100
30	0	10	10	100
50	0	10	10	100
65	0	10	10	100
100	0	10	10	100

48 Hour LC50 : 14.0 %

95% fid. limits : 10.0 - 20.0 %

Comments : 100% MORTALITY IN 20% CONCENTRATION

SLOPE of Mortality Curve :
 LC50 Calculated By : BINOMIAL

TOXICITY TEST PARAMETERS

Sample Number: 06891182

TEST E L A P S E D T I M E
 CONC. % 00:00 24:00 48:00

Control	pH	8.0	8.1
	O2 ppm	8.7	8.9
	Cond.	359	420
	Temp(C)	20.0	20.0
10	pH	8.2	8.2
	O2 ppm	8.7	8.6
	Cond.	759	694
	Temp(C)	20.0	20.0
20	pH	8.3	7.9
	O2 ppm	8.6	7.3
	Cond.	937	916
	Temp(C)	20.0	20.0
30	pH	8.4	7.8
	O2 ppm	8.5	6.4
	Cond.	1199	1197
	Temp(C)	20.0	20.0
50	pH	8.5	7.5
	O2 ppm	8.5	2.9
	Cond.	1699	1640
	Temp(C)	20.0	20.0
65	pH	8.5	7.4
	O2 ppm	8.5	1.6
	Cond.	2290	1987
	Temp(C)	20.0	20.0
100	pH	8.6	7.5
	O2 ppm	8.2	0.9
	Cond.	3210	3090
	Temp(C)	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT

Sample: 06900028

TEST CONDITIONS

Company : Cornwall Chemicals Limited
 Cornwall, ONT
 (33050006)
 Region : Southeast
 Industry : Organic Chemical

Control point : process effluent, (100)

Laboratory : BEAK
 Sampling Method : GRAB
 Sampled By : F. O'Brien
 Date Collected : 01/08/90
 Received : 01/09/90
 Tested : 01/09/90 at: 2030

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00 48:00	
100	0	10	10	100
65	0	10	10	100
50	0	10	10	100
30	0	2	10	100
20	0	1	7	70
10	0	0	0	0
Control				0

48 Hour LC50 : 16.7 %

95% fid. limits : 14.2 - 19.6 %

Comments : 70 % MORTALITY IN 20 % CONCENTRATION

SLOPE of Mortality Curve :
 LC50 Calculated By : SPEARMAN-KABER

TOXICITY TEST PARAMETERS

Sample Number: 06900028

TEST ELAPSED TIME
 CONC. % 00:00 24:00 48:00

100	pH	6.8	6.9
	O2 ppm	9.8	0.8
	Cond.	2330	2420
	Temp(C)	20.0	21.0
65	pH	7.0	7.0
	O2 ppm	9.5	0.8
	Cond.	1670	1721
	Temp(C)	20.0	21.0
50	pH	7.2	7.0
	O2 ppm	9.4	1.0
	Cond.	1329	1406
	Temp(C)	20.0	21.0
30	pH	7.4	7.2
	O2 ppm	9.3	2.3
	Cond.	969	985
	Temp(C)	20.0	21.0
20	pH	7.6	7.7
	O2 ppm	9.4	7.0
	Cond.	800	762
	Temp(C)	20.0	21.0
10	pH	7.8	8.1
	O2 ppm	9.4	8.5
	Cond.	78	586
	Temp(C)	20.0	21.0
Control	pH		8.1
	O2 ppm		9.1
	Cond.		379
	Temp(C)	21.0	21.0

TOXICITY TEST REPORT

Sample: 06900221

TEST CONDITIONS

Company : Cornwall Chemicals Limited
 Cornwall, ONT
 (33050006)
 Region : Southeast
 Industry : Organic Chemical
 Control point : process effluent, (100)
 Laboratory : BEAK
 Sampling Method : GRAB
 Sampled By : BUD O'BRIEN
 Date Collected : 02/05/90
 Received : 02/06/90
 Tested : 02/07/90 at: 1145
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	10	10	100
65	0	10	10	100
50	0	10	10	100
30	0	0	3	30
20	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : 33.8 %

95% fid. limits : 29.5 - 38.5 %

Comments : 100% MORTALITY IN 50% TEST CONCENTRATION

SLOPE of Mortality Curve :
 LC50 Calculated By : SPEARMAN-KARBER

TOXICITY TEST PARAMETERS

Sample Number: 06900221

TEST CONC. %	E L A P S E D T I M E		
	00:00	24:00	48:00

100	pH	5.7	4.8
	O2 ppm	9.2	1.6
	Cond.	2150	2210
	Temp(C)	20.0	21.0
65	pH	6.3	6.3
	O2 ppm	8.8	1.7
	Cond.	1468	1505
	Temp(C)	20.0	21.0
50	pH	6.5	6.5
	O2 ppm	8.7	2.0
	Cond.	1232	1258
	Temp(C)	20.0	21.0
30	pH	6.9	7.6
	O2 ppm	8.5	6.5
	Cond.	793	831
	Temp(C)	20.0	21.0
20	pH	6.9	7.7
	O2 ppm	8.5	7.3
	Cond.	727	758
	Temp(C)	20.0	21.0
10	pH	7.2	7.9
	O2 ppm	8.8	8.2
	Cond.	551	569
	Temp(C)	20.0	21.0
Control	pH	7.8	8.1
	O2 ppm	8.8	8.4
	Cond.	402	419
	Temp(C)	20.0	21.0

TOXICITY TEST REPORT

Sample: 06900344

TEST CONDITIONS

Company : Cornwall Chemicals Limited
Cornwall, ONT
(33050006)
Region : Southeast
Industry : Organic Chemical
Control point : process effluent, (100)
Laboratory : BEAK
Sampling Method : GRAB
Sampled By : BUD O'BRIEN
Date Collected : 03/05/90
Received : 03/06/90
Tested : 03/07/90 at: 1700
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E			TOTAL MORTALITY
	%	00:00	24:00 48:00	
100	0	10	10	100
65	0	10	10	100
50	0	7	10	100
30	0	2	6	60
20	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : 29.4 %

95% fid. limits : 25.5 - 33.9 %

Comments : 60% MORTALITY IN 30% TEST CONCENTRATION

TOXICITY TEST PARAMETERS

Sample Number: 06900344

TEST CONC. %	E L A P S E D T I M E		
	00:00	24:00	48:00

100	pH	5.9	4.8
	O2 ppm	9.1	0.6
	Cond.	8090	8190
	Temp(C)	21.0	22.0
65	pH	6.5	5.5
	O2 ppm	8.5	0.5
	Cond.	5580	5540
	Temp(C)	21.0	22.0
50	pH	6.7	6.5
	O2 ppm	8.4	0.5
	Cond.	4360	4380
	Temp(C)	21.0	22.0
30	pH	7.1	7.5
	O2 ppm	8.1	3.4
	Cond.	2750	2740
	Temp(C)	21.0	22.0
20	pH	7.3	7.9
	O2 ppm	8.2	7.4
	Cond.	1814	1844
	Temp(C)	21.0	22.0
10	pH	7.6	8.0
	O2 ppm	8.0	7.6
	Cond.	1152	1317
	Temp(C)	21.0	22.0
Control	pH	8.2	8.1
	O2 ppm	8.0	8.1
	Cond.	408	418
	Temp(C)	21.0	22.0

COMPANY: Courtaulds Fibres Canada, Cornwall
(1900000)
(now with Cornwall Plant)
SECTOR: Organic Chemical
REGION: Southeast

SUMMARY

The data for thirty-eight trout bioassays, conducted on effluent samples collected between October 1989 and March 1990, were provided by Courtaulds Fibres Canada. All twelve samples of process effluent collected from control point 0100 and 0300 were determined to have been acutely lethal to test fish. For samples collected from 0100, statistically, the percentage effluent required to kill 50 % of the test fish by the end of the four days exposure were 6.3 %, 3.0 %, 3.9 %, 12.0 %, 1.0 % and 2.0 %. For samples collected from 0300, statistically, the percentage effluent required to kill 50 % of the test fish by the end of the four days exposure were 61.0 %, 8.8 %, 12.0 %, 14.1 %, 18.4 % and 12.6 %. All the samples collected from the four combined effluent discharges were determined to have been non-acutely lethal to test fish except for one sample. The Ministry audit sample, collected in November from combined effluent 0700, had a 96 hour LC50 of 53.0 %. Both intake water samples were determined to have been non-acutely lethal.

process effluent

03890221	sampled: 10/18/89	LC50:	6.3 %
	95% fid. limits: 4.7 -	8.5 % slope:	5.5
comments:			
01890269	sampled: 11/21/89	LC50:	2.7 %
	95% fid. limits: 2.1 -	3.6 %	
comments: MISA audit sample.			
03890296	sampled: 11/22/89	LC50:	3.0 %
	95% fid. limits: 1.9 -	4.6 % slope:	3.4
comments:			
03890384	sampled: 12/19/89	LC50:	3.9 %
	95% fid. limits: 2.6 -	5.6 % slope:	3.4
comments:			
03900041	sampled: 01/16/90	LC50:	12.0 %
	95% fid. limits: 9.1 -	15.7 % slope:	5.5
comments:			
03900162	sampled: 02/27/90	LC50:	1.0 %
	95% fid. limits: 0.1 -	1.9 % slope:	2.1
comments:			

Courtaulds Fibres Canada (continued)

03900228 sampled: 03/20/90 LC50: 2.0 %
95% fid. limits: 1.2 - 3.1 % slope: 4.2
comments: Lethal

pr 200

03890227 sampled: 10/18/89 LC50: 25.3 %
95% fid. limits: 18.8 - 33.9 % slope: 5.5
comments:

process effluent

03890222 sampled: 10/18/89 LC50: 61.0 %
95% fid. limits: 40.0 - 65.0 %
comments:

01890270 sampled: 11/21/89 LC50: 3.3 %
95% fid. limits: 2.1 - 5.0 %
comments: MISA audit sample.

03890297 sampled: 11/22/89 LC50: 8.8 %
95% fid. limits: 6.8 - 11.4 % slope: 5.5
comments:

03890385 sampled: 12/19/89 LC50: 12.0 %
95% fid. limits: 9.1 - 15.7 % slope: 5.5
comments:

03900042 sampled: 01/16/90 LC50: 14.1 %
95% fid. limits: 10.0 - 20.0 %
comments: Lethal

03900163 sampled: 02/27/90 LC50: 18.4 %
95% fid. limits: 13.7 - 24.6 % slope: 5.7
comments:

03900229 sampled: 03/20/90 LC50: 12.6 %
95% fid. limits: 9.4 - 16.9 % slope: 5.5
comments: Lethal

combined effluent

03890223 sampled: 10/18/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03890298 sampled: 11/22/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

Courtaulds Fibres Canada (continued)

03890386 sampled: 12/19/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900043 sampled: 01/16/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900164 sampled: 02/27/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test--Non-lethal

03900230 sampled: 03/20/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; Non lethal

combined effluent

03890224 sampled: 10/18/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03890299 sampled: 11/22/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03890387 sampled: 12/19/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900044 sampled: 01/16/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test

03900165 sampled: 02/27/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900231 sampled: 03/20/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

combined effluent

03890225 sampled: 10/18/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

01890273 sampled: 11/21/89 LC50: 53.0 %
95% fid. limits: 36.8 - 79.4 %
comments: MISA audit sample.

Courtaulds Fibres Canada (continued)

03890300 sampled: 11/22/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03890388 sampled: 12/19/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900045 sampled: 01/16/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900166 sampled: 02/27/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test--Non-lethal

03900232 sampled: 03/20/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; Non lethal

combined effluent

03890226 sampled: 10/18/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03890301 sampled: 11/22/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03890389 sampled: 12/19/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900046 sampled: 01/16/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900167 sampled: 02/27/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test--Non-lethal

03900233 sampled: 03/20/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; Non lethal

Courtaulds Fibres Canada (continued)

rain gauge

intake water

03890302 sampled: 11/22/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03890390 sampled: 12/19/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

TOXICITY TEST REPORT

Sample: 03890221

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : process effluent, (100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : L. Lortie
 Date Collected : 10/18/89
 Received : 10/19/89
 Tested : 10/19/89 at: 1630
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E								TOTAL MORTALITY	
	%	00:00	01:00	02:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	1	1	10
10	0	10	10	10	10	10	10	10	10	100
100	0	10	10	10	10	10	10	10	10	100

96 Hour LC50 : 6.3 %

95% fid. limits : 4.7 - 8.5 %

Comments :

SLOPE of Mortality Curve : 5.5
 LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 03890221

TEST ELAPSED TIME
 CONC. % 00:00 01:00 02:00 04:00 24:00 48:00 72:00 96:00

Control	pH	7.7								8.4
	O2 ppm	8.1								9.1
	Cond.	576								557
	Temp(C)	14.0	14.0	14.0	14.0	15.0	15.0	15.0	15.0	15.5
1	pH	7.5								8.3
	O2 ppm	8.7								9.1
	Cond.	639								637
	Temp(C)	14.0	14.0	14.0	14.0	15.0	15.0	15.0	15.0	15.5
2	pH	7.2								8.2
	O2 ppm	8.3								9.1
	Cond.	738								754
	Temp(C)	14.0	14.0	14.0	14.0	15.0	15.0	15.0	15.0	15.5
5	pH	6.8								7.8
	O2 ppm	8.3								8.0
	Cond.	936								957
	Temp(C)	14.0	14.0	14.0	14.0	15.0	15.0	15.0	15.0	15.5
10	pH	6.3	6.3							
	O2 ppm	8.4	8.4							
	Cond.	1330	1330							
	Temp(C)	14.0	14.0							
100	pH	2.0	2.0							
	O2 ppm	8.7	8.7							
	Cond.	1272	1272							
	Temp(C)	14.0	14.0							

MISA Trout

SLOPE of Mortality Curve :
LC50 Calculated By : sk

TOXICITY TEST REPORT

Sample: 01890269

TEST CONDITIONS

Company : Courtaulds Fibres Canada
Cornwall, ONT
(1900000)
Region : Southeast
Industry : Organic Chemical
Control point : process effluent, (100)
Laboratory : MOE
Sampling Method : grab
Sampled By : J. Lebow
Date Collected : 11/21/89
Received : 11/23/89
Tested : 11/23/89 at: 1430
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME								TOTAL MORTALITY
	%	00:00	00:01	00:05	02:00	24:00	48:00	72:00	96:00
100	0	10	10	10	10	10	10	10	100
65	0	0	10	10	10	10	10	10	100
40	0	0	10	10	10	10	10	10	100
30	0	0	10	10	10	10	10	10	100
20	0	0	10	10	10	10	10	10	100
10	0	0	10	10	10	10	10	10	100
1	0	0	0	0	0	1	1	1	10
1	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	1	1	1	10

96 Hour LC50 : 2.7 %

95% fid. limits : 2.1 - 3.6 %

Comments : MISA audit sample.

TOXICITY TEST PARAMETERS

Sample Number: 01890269

TEST CONC. %	ELAPSED TIME							
	00:00	00:01	00:05	02:00	24:00	48:00	72:00	96:00
100	pH	1.7		1.9				
	O2 ppm	11.9		9.7				
	Cond.	1800		1790				
	Temp(C)	13.0		14.0				
65	pH			1.9				
	O2 ppm			9.7				
	Cond.			1710				
	Temp(C)			14.0				
40	pH			2.1				
	O2 ppm			9.8				
	Cond.			1540				
	Temp(C)			14.0				
30	pH			2.1				
	O2 ppm			9.9				
	Cond.			1100				
	Temp(C)			14.0				
20	pH			2.3				
	O2 ppm			9.9				
	Cond.			690				
	Temp(C)			14.0				
10	pH			2.8				
	O2 ppm			9.9				
	Cond.			575				
	Temp(C)			14.0				
1	pH			7.2	7.6	7.5	7.7	7.9
	O2 ppm			10.0	10.6	10.7	9.8	9.3
	Cond.			295	295	310	300	300
	Temp(C)			14.0	14.0	14.0	14.0	14.0
0	pH			7.3	7.7	7.6	7.8	8.1
	O2 ppm			10.0	10.8	10.9	10.2	9.5
	Cond.			255	265	280	265	290
	Temp(C)			14.0	14.0	14.0	14.0	14.0
Control	pH			7.5	7.7	7.6	7.9	8.0
	O2 ppm			10.1	10.7	10.8	10.3	9.7
	Cond.			240	245	250	255	265
	Temp(C)			14.0	14.0	14.0	14.0	14.0

TOXICITY TEST REPORT

Sample: 03890296

TEST CONDITIONS

Company : Courtaulds Fibres Canada
Cornwall, ONT
(1900000)

Region : Southeast

Industry : Organic Chemical

Control point : process effluent, (100)

Laboratory : BAR

Sampling Method : Grab

Sampled By : L. Lortie

Date Collected : 11/22/89

Received : 11/23/89

Tested : 11/24/89 at: 1200

Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout

Weight(gm) :

Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME								TOTAL MORTALITY
	%	00:00	01:00	02:00	04:00	24:00	48:00	72:00	96:00
Control	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0
5	0	0	0	0	2	7	8	8	80
10	0	0	0	10	10	10	10	10	100
20	0	10	10	10	10	10	10	10	100
40	0	10	10	10	10	10	10	10	100
65	0	10	10	10	10	10	10	10	100
100	0	10	10	10	10	10	10	10	100

96 Hour LC50 : 3.0 %

95% fid. limits : 1.9 - 4.6 %

Comments :

TOXICITY TEST PARAMETERS

Sample Number: 03890296

TEST CONC.	ELAPSED TIME							
	%	00:00	01:00	02:00	04:00	24:00	48:00	72:00
Control	pH	7.8						8.5
	O2 ppm	9.2						9.3
	Cond.	560						561
	Temp(C)	14.5	14.5	14.5	14.5	14.5	14.5	15.0
1	pH	7.3						8.5
	O2 ppm	9.0						9.4
	Cond.	642						654
	Temp(C)	14.5	14.5	14.5	14.5	14.5	14.5	15.0
5	pH	6.8					8.3	
	O2 ppm	10.0					9.7	
	Cond.	934					1024	
	Temp(C)	14.5	14.5	14.5	14.5	14.5	14.5	15.0
10	pH	6.3			6.3			
	O2 ppm	10.6			10.6			
	Cond.	1396			1396			
	Temp(C)	14.5	14.5	14.5	14.5			
20	pH	3.1	3.1					
	O2 ppm	11.0	11.0					
	Cond.	2740	2740					
	Temp(C)	14.5	14.5					
40	pH	2.8	2.8					
	O2 ppm	10.4	10.4					
	Cond.	3500	3500					
	Temp(C)	14.5	14.5					
65	pH	2.3	2.3					
	O2 ppm	10.1	10.1					
	Cond.	7070	7070					
	Temp(C)	14.5	14.5					
100	pH	2.0	2.0					
	O2 ppm	10.1	10.1					
	Cond.	4290	4290					
	Temp(C)	14.5	14.5					

MISA Trout

SLOPE of Mortality Curve : 3.4
LC50 Calculated By : Probit

TOXICITY TEST REPORT

Sample: 03890384

TEST CONDITIONS

Company : Courtaulds Fibres Canada
Cornwall, ONT
(1900000)
Region : Southeast
Industry : Organic Chemical
Control point : process effluent, (100)
Laboratory : BAR
Sampling Method : Grab
Sampled By : M. Pelletier
Date Collected : 12/19/89
Received : 12/21/89
Tested : 12/22/89 at: 1730

Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	10	10	10	10	100
20	0	10	10	10	10	100
10	0	6	10	10	10	100
5	0	0	5	6	6	60
3	0	0	0	1	1	10
1	0	0	0	1	1	10
Control	0	0	0	0	0	0

96 Hour LC50 : 3.9 %

95% fid. limits : 2.6 - 5.6 %

Comments :

TOXICITY TEST PARAMETERS

Sample Number: 03890384

TEST CONC. %	ELAPSED TIME				
	00:00	24:00	48:00	72:00	96:00

100	pH	2.2	3.2		
	O2 ppm	10.4	9.9		
	Cond.	9050	9070		
	Temp(C)	15.0	14.0		
20	pH	6.0	7.1		
	O2 ppm	10.2	9.9		
	Cond.	1690	1730		
	Temp(C)	15.0	14.0		
10	pH	6.8	7.3		
	O2 ppm	9.5	8.9		
	Cond.	1133	1120		
	Temp(C)	15.0	14.0	14.0	
5	pH	7.2	8.3		
	O2 ppm	9.2	9.0		
	Cond.	830	826		
	Temp(C)	15.0	14.0	14.0	14.0
2	pH	7.3			8.4
	O2 ppm	9.2			9.1
	Cond.	666			699
	Temp(C)	15.0	14.0	14.0	14.0
1	pH	7.6			8.4
	O2 ppm	8.9			8.7
	Cond.	609			611
	Temp(C)	15.0	14.0	14.0	14.0
Control	pH	7.9			8.5
	O2 ppm	8.9			9.0
	Cond.	554			533
	Temp(C)	15.0	14.0	14.0	14.0

TOXICITY TEST REPORT

Sample: 03900041

TEST CONDITIONS

Company : Courtaulds Fibres Canada
Cornwall, ONT
(1900000)

Region : Southeast
Industry : Organic Chemical

Control point : process effluent, (100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : M. Pelletier
Date Collected : 01/16/90
Received : 01/18/90
Tested : 01/18/90 at: 1500

Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME								TOTAL MORTALITY
	%	00:00	01:00	02:00	04:00	24:00	48:00	72:00	96:00
100	0	10	10	10	10	10	10	10	100
40	0	10	10	10	10	10	10	10	100
20	0	0	10	10	10	10	10	10	100
10	0	0	0	2	2	2	2	2	20
5	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0

96 Hour LC50 : 12.0 %

95% fid. limits : 9.1 - 15.7 %

Comments :

TOXICITY TEST PARAMETERS

Sample Number: 03900041

TEST CONC. %	ELAPSED TIME							
		00:00	01:00	02:00	04:00	24:00	48:00	72:00
100	pH	2.1	2.1					
	O2 ppm	10.3	10.3					
	Cond.	8180	8180					
	Temp(C)	15.0	15.0					
40	pH	3.0	3.0					
	O2 ppm	9.7	9.7					
	Cond.	3040	3040					
	Temp(C)	15.0	15.0					
20	pH	6.3		6.3				
	O2 ppm	9.2		9.2				
	Cond.	1544		1544				
	Temp(C)	15.0	15.0	15.0				
10	pH	7.0						8.3
	O2 ppm	8.8						10.1
	Cond.	1031						995
	Temp(C)	15.0	15.0	15.0	15.0	15.0	14.0	14.0
5	pH	7.4						8.4
	O2 ppm	8.5						10.0
	Cond.	767						734
	Temp(C)	15.0	15.0	15.0	15.0	15.0	14.0	14.0
1	pH	7.8						8.4
	O2 ppm	8.5						9.7
	Cond.	597						568
	Temp(C)	15.0	15.0	15.0	15.0	15.0	14.0	14.0
Control	pH	7.9						8.3
	O2 ppm	8.4						9.5
	Cond.	550						525
	Temp(C)	15.0	15.0	15.0	15.0	15.0	14.0	14.0

MISA Trout

SLOPE of Mortality Curve : 2.1
LC50 Calculated By : Probit

TOXICITY TEST REPORT

Sample: 03900162

TEST CONDITIONS

Company : Courtaulds Fibres Canada
Cornwall, ONT
(1900000)
Region : Southeast
Industry : Organic Chemical
Control point : process effluent, (100)
Laboratory : BAR
Sampling Method : Grab
Sampled By : M. Pelletier
Date Collected : 02/27/90
Received : 03/01/90
Tested : 03/02/90 at: 1230
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME								TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:00	72:00	96:00	%
100	0	10	10	10	10	10	10	10	100
65	0	10	10	10	10	10	10	10	100
40	0	10	10	10	10	10	10	10	100
20	0	10	10	10	10	10	10	10	100
10	0	0	0	0	10	10	10	10	100
5	0	0	0	0	0	9	9	9	90
1	0	0	0	0	0	4	5	5	50
Control	0	0	0	0	0	0	0	0	0

96 Hour LC50 : 1.0 %

95% fid. limits : 0.1 - 1.9 %

Comments :

TOXICITY TEST PARAMETERS

Sample Number: 03900162

TEST CONC. %	ELAPSED TIME							
	00:00	01:00	02:00	04:00	24:00	48:00	72:00	96:00
100	pH 1.9	1.9						
	O2 ppm 8.1	8.1						
	Cond. 4050	4050						
	Temp(C) 15.0	15.0						
65	pH 2.1	2.1						
	O2 ppm 8.3	8.3						
	Cond. 9430	9430						
	Temp(C) 15.0	15.0						
40	pH 2.3	2.3						
	O2 ppm 8.4	8.4						
	Cond. 5980	5980						
	Temp(C) 15.0	15.0						
20	pH 3.7	3.7						
	O2 ppm 8.5	8.5						
	Cond. 5980	5980						
	Temp(C) 15.0	15.0						
10	pH 6.3				8.1			
	O2 ppm 8.5				11.5			
	Cond. 1442				1441			
	Temp(C) 15.0	15.0	14.5	14.5	14.0			
5	pH 6.9				8.1			
	O2 ppm 8.7				11.3			
	Cond. 984				978			
	Temp(C) 15.0	15.0	14.5	14.5	14.0	14.0	14.0	14.0
1	pH 7.6				8.2			
	O2 ppm 7.7				9.4			
	Cond. 619				636			
	Temp(C) 15.0	15.0	14.5	14.5	14.0	14.0	14.0	14.0
Control	pH 7.9				8.5			
	O2 ppm 8.9				9.7			
	Cond. 543				552			
	Temp(C) 15.0	15.0	14.5	14.5	14.0	14.0	14.0	14.0

TOXICITY TEST REPORT

Sample: 03900228

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical

Control point : process effluent, (100)

Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Pelletier
 Date Collected : 03/20/90
 Received : 03/22/90
 Tested : 03/22/90 at: 1420

Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME								TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:00	72:00	96:00	%
100	0	10	10	10	10	10	10	10	100
65	0	10	10	10	10	10	10	10	100
40	0	10	10	10	10	10	10	10	100
20	0	10	10	10	10	10	10	10	100
10	0	0	0	0	6	10	10	10	100
5	0	0	0	0	3	10	10	10	100
1	0	0	0	0	0	0	1	1	10
Control	0	0	0	0	0	0	0	0	0

96 Hour LC50 : 2.0 %

95% fid. limits : 1.2 - 3.1 %

Comments : Lethal

SLOPE of Mortality Curve : 4.2
 LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 03900228

TEST CONC. %	ELAPSED TIME							
	00:00	01:00	02:00	04:00	24:00	48:00	72:00	96:00
100	pH 2.0	2.0						
	O2 ppm 9.7	9.7						
	Cond. 2900	2900						
	Temp(C) 15.0	15.0						
65	pH 2.3	2.3						
	O2 ppm 9.4	9.4						
	Cond. 7850	7850						
	Temp(C) 15.0	15.0						
40	pH 2.5	2.5						
	O2 ppm 9.4	9.4						
	Cond. 5000	5000						
	Temp(C) 15.0	15.0						
20	pH 3.3	3.3						
	O2 ppm 8.8	8.8						
	Cond. 2350	2350						
	Temp(C) 15.0	15.0						
10	pH 6.3				7.6			
	O2 ppm 8.5				9.1			
	Cond. 1243				1275			
	Temp(C) 15.0	15.0	15.0	15.0	14.0	14.5		
5	pH 6.9					8.1		
	O2 ppm 8.3					9.4		
	Cond. 899					904		
	Temp(C) 15.0	15.0	15.0	15.0	14.0	14.5		
1	pH 7.6							8.5
	O2 ppm 8.3							9.7
	Cond. 614							592
	Temp(C) 15.0	15.0	15.0	15.0	14.0	14.5	15.0	15.0
Control	pH 7.9							8.5
	O2 ppm 8.1							9.0
	Cond. 553							527
	Temp(C) 15.0	15.0	15.0	15.0	14.0	14.5	15.0	15.0

TOXICITY TEST REPORT

Sample: 03890227

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : pr 200, (200)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : L. Lortie
 Date Collected : 10/18/89
 Received : 10/19/89
 Tested : 10/19/89 at: 1800
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME								TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0
20	0	0	0	0	1	1	1	1	10
40	0	3	3	10	10	10	10	10	100
65	0	10	10	10	10	10	10	10	100
100	0	10	10	10	10	10	10	10	100

96 Hour LC50 : 25.3 %

95% fid. limits : 18.8 - 33.9 %

Comments :

SLOPE of Mortality Curve : 5.5
 LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 03890227

TEST CONC. %	ELAPSED TIME							
	00:00	01:00	02:00	04:00	24:00	48:00	72:00	96:00
Control	pH 7.7 O2 ppm 8.0 Cond. 571 Temp(C) 14.0	15.0	15.0	15.0	15.0	15.0	15.0	8.4 9.4 550 15.5
5	pH 7.2 O2 ppm 9.1 Cond. 575 Temp(C) 14.0	15.0	15.0	15.0	15.0	15.0	15.0	8.2 9.4 564 15.5
10	pH 7.0 O2 ppm 8.9 Cond. 597 Temp(C) 14.0	15.0	15.0	15.0	15.0	15.0	15.0	8.2 9.4 569 15.5
20	pH 6.3 O2 ppm 8.9 Cond. 607 Temp(C) 14.0	15.0	15.0	15.0	15.0	15.0	15.0	8.0 9.4 583 15.5
40	pH 3.4 O2 ppm 8.9 Cond. 846 Temp(C) 14.0	15.0	15.0	3.4 8.9 846 15.0				
65	pH 2.5 O2 ppm 9.1 Cond. 2140 Temp(C) 14.0	2.5 9.1 2140 15.0						
100	pH 2.2 O2 ppm 9.4 Cond. 3910 Temp(C) 14.0	2.2 9.4 3910 15.0						

TOXICITY TEST REPORT

Sample: 03890222

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : process effluent, (300)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : L. Lortie
 Date Collected : 10/18/89
 Received : 10/19/89
 Tested : 10/19/89 at: 1730
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E								TOTAL MORTALITY
	%	00:00	01:00	02:00	04:00	24:00	48:00	72:00	96:00
Control	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0
65	0	0	0	0	10	10	10	10	100
100	0	10	10	10	10	10	10	10	100

96 Hour LC50 : 61.0 %

95% fid. limits : 40.0 - 65.0 %

Comments :

SLOPE of Mortality Curve :
 LC50 Calculated By : Geometric Mean

TOXICITY TEST PARAMETERS

Sample Number: 03890222

TEST CONC. %	E L A P S E D T I M E								
		00:00	01:00	02:00	04:00	24:00	48:00	72:00	96:00
Control	pH	7.7							8.2
	O2 ppm	8.1							8.4
	Cond.	572							558
	Temp(C)	14.0	14.0	14.0	14.0	15.0	15.0	15.0	15.5
10	pH	8.5							8.3
	O2 ppm	8.0							8.8
	Cond.	715							711
	Temp(C)	14.0	14.0	14.0	14.0	15.0	15.0	15.0	15.5
20	pH	9.0							8.2
	O2 ppm	7.9							8.8
	Cond.	871							826
	Temp(C)	14.0	14.0	14.0	14.0	15.0	15.0	15.0	15.5
40	pH	9.3							7.9
	O2 ppm	7.4							7.2
	Cond.	1093							1086
	Temp(C)	14.0	14.0	14.0	14.0	15.0	15.0	15.0	15.5
65	pH	10.1				10.0			
	O2 ppm	7.2				8.7			
	Cond.	1785				1784			
	Temp(C)	14.0	14.0	14.0	14.0	15.0			
100	pH	11.7	11.7						
	O2 ppm	7.0	7.0						
	Cond.	4530	4530						
	Temp(C)	14.0	14.0						

MISA Trout

SLOPE of Mortality Curve :
LC50 Calculated By : sk

TOXICITY TEST REPORT

Sample: 01890270

TEST CONDITIONS

Company : Courtaulds Fibres Canada
Cornwall, ONT
(1900000)
Region : Southeast
Industry : Organic Chemical
Control point : process effluent, (300)
Laboratory : MOE
Sampling Method : grab
Sampled By : J. Lebow
Date Collected : 11/21/89
Received : 11/23/89
Tested : 11/23/89 at: 1430
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME								TOTAL MORTALITY
%	00:00	00:05	01:00	02:00	24:00	48:00	72:00	96:00	%
100	0	10	10	10	10	10	10	10	100
65	0	10	10	10	10	10	10	10	100
40	0	10	10	10	10	10	10	10	100
30	0	10	10	10	10	10	10	10	100
20	0	0	0	0	10	10	10	10	100
10	0	0	0	0	10	10	10	10	100
5	0	0	0	0	2	4	5	6	60
1	0	0	0	0	0	0	0	1	10
Control	0	0	0	0	0	0	1	1	10

96 Hour LC50 : 3.3 %

95% fid. limits : 2.1 - 5.0 %

Comments : MISA audit sample.

TOXICITY TEST PARAMETERS

Sample Number: 01890270

TEST CONC. %	ELAPSED TIME							
	00:00	00:05	01:00	02:00	24:00	48:00	72:00	96:00
100	pH	11.8	11.7					
	O2 ppm	5.0	7.4					
	Cond.	4300	4015					
	Temp(C)	13.0	14.0					
65	pH		11.3					
	O2 ppm		6.7					
	Cond.		2650					
	Temp(C)		14.0					
40	pH		11.0					
	O2 ppm		6.9					
	Cond.		1720					
	Temp(C)		14.0					
30	pH		10.7					
	O2 ppm		7.1					
	Cond.		1160					
	Temp(C)		14.0					
20	pH		8.8					
	O2 ppm		7.5					
	Cond.		840					
	Temp(C)		14.0					
10	pH		8.7					
	O2 ppm		8.0					
	Cond.		490					
	Temp(C)		14.0					
5	pH		8.4		8.2	7.7	7.9	8.0
	O2 ppm		9.3		10.7	10.1	9.7	9.4
	Cond.		345		360	385	370	380
	Temp(C)		14.0		14.0	14.0	14.0	14.0
1	pH		7.9		7.8	7.6	7.8	7.8
	O2 ppm		9.7		10.5	10.5	9.7	8.8
	Cond.		245		280	290	275	290
	Temp(C)		14.0		14.0	14.0	14.0	14.0
Control	pH		7.0		7.3	7.7	7.9	8.1
	O2 ppm		9.8		10.1	10.7	10.2	9.6
	Cond.		235		235	250	250	255
	Temp(C)		14.0		14.0	14.0	14.0	14.0

TOXICITY TEST REPORT

Sample: 03890297

TEST CONDITIONS

Company : Courtaulds Fibres Canada
Cornwall, ONT
(1900000)

Region : Southeast

Industry : Organic Chemical

Control point : process effluent, (300)

Laboratory : BAR

Sampling Method : Grab

Sampled By : L. Lortie

Date Collected : 11/22/89

Received : 11/23/89

Tested : 11/24/89 at: 1200

Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout

Weight(gm) :

Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME							TOTAL MORTALITY
%	00:00	01:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0
10	0	0	0	5	5	7	7	70
20	0	0	10	10	10	10	10	100
40	0	10	10	10	10	10	10	100
65	0	10	10	10	10	10	10	100
100	0	10	10	10	10	10	10	100

96 Hour LC50 : 8.8 %

95% fid. limits : 6.8 - 11.4 %

Comments :

TOXICITY TEST PARAMETERS

Sample Number: 03890297

TEST CONC. %	ELAPSED TIME						
	00:00	01:00	04:00	24:00	48:00	72:00	96:00
Control	pH 7.8						8.5
	O2 ppm 8.6						9.3
	Cond. 564						571
	Temp(C) 15.0	14.5	14.5	14.5	14.5	15.0	15.0
5	pH 8.6						8.5
	O2 ppm 8.6						9.2
	Cond. 604						607
	Temp(C) 15.0	14.5	14.5	14.5	14.5	15.0	15.0
10	pH 9.7			8.8			
	O2 ppm 8.1			9.6			
	Cond. 756			627			
	Temp(C) 15.0	14.5	14.5	14.5	14.5	15.0	15.0
20	pH 10.3		10.3				
	O2 ppm 7.8		7.8				
	Cond. 1008		1008				
	Temp(C) 15.0	14.5	14.5				
40	pH 11.5	11.5					
	O2 ppm 7.7	7.7					
	Cond. 1960	1960					
	Temp(C) 15.0	14.5					
65	pH 12.0	12.0					
	O2 ppm 7.4	7.4					
	Cond. 3580	3580					
	Temp(C) 15.0	14.5					
100	pH 12.2	12.2					
	O2 ppm 7.0	7.0					
	Cond. 6180	6180					
	Temp(C) 15.0	14.5					

TOXICITY TEST REPORT

Sample: 03890385

TEST CONDITIONS

Company : Courtaulds Fibres Canada
Cornwall, ONT
(1900000)
Region : Southeast
Industry : Organic Chemical
Control point : process effluent, (300)
Laboratory : BAR
Sampling Method : Grab
Sampled By : M. Pelleteir
Date Collected : 12/19/89
Received : 12/21/89
Tested : 12/22/89 at: 1730
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME							TOTAL MORTALITY
	%	00:00	01:00	04:00	24:00	48:00	72:00	96:00
100	0	10	10	10	10	10	10	100
65	0	10	10	10	10	10	10	100
40	0	10	10	10	10	10	10	100
20	0	0	0	10	10	10	10	100
10	0	0	0	0	0	1	2	20
5	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0

96 Hour LC50 : 12.0 %

95% fid. limits : 9.1 - 15.7 %

Comments :

TOXICITY TEST PARAMETERS

Sample Number: 03890385

TEST CONC. %	ELAPSED TIME							
		00:00	01:00	04:00	24:00	48:00	72:00	96:00
100	pH	12.0	12.0					
	O2 ppm	7.0	7.0					
	Cond.	4860	4860					
	Temp(C)	15.0	15.0					
65	pH	11.7	11.7					
	O2 ppm	8.2	8.2					
	Cond.	2870	2870					
	Temp(C)	15.0	15.0					
40	pH	11.1	11.1					
	O2 ppm	7.9	7.9					
	Cond.	1633	1633					
	Temp(C)	15.0	15.0					
20	pH	9.8				9.8		
	O2 ppm	7.7				7.5		
	Cond.	917				922		
	Temp(C)	15.0	15.0	14.0	14.0			
10	pH	9.0						8.5
	O2 ppm	7.6						9.0
	Cond.	669						667
	Temp(C)	15.0	15.0	14.0	14.0	14.0	14.0	14.5
5	pH	8.5						8.4
	O2 ppm	7.8						9.2
	Cond.	618						591
	Temp(C)	15.0	15.0	14.0	14.0	14.0	14.0	14.5
Control	pH	7.9						8.5
	O2 ppm	8.8						9.0
	Cond.	552						533
	Temp(C)	15.0	15.0	14.0	14.0	14.0	14.0	14.5

TOXICITY TEST REPORT

Sample: 03900042

TEST CONDITIONS

Company : Courtaulds Fibres Canada
Cornwall, ONT
(1900000)
Region : Southeast
Industry : Organic Chemical
Control point : process effluent, (300)
Laboratory : BAR
Sampling Method : Grab
Sampled By : M. Pelletier
Date Collected : 01/16/90
Received : 01/18/90
Tested : 01/18/90 at: 1500
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME								TOTAL MORTALITY
	%	00:00	01:00	02:00	04:00	24:00	48:00	72:00	96:00
100	0	10	10	10	10	10	10	10	100
40	0	0	10	10	10	10	10	10	100
20	0	0	0	0	10	10	10	10	100
10	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	1	10
Control	0	0	0	0	0	0	0	0	0

96 Hour LC50 : 14.1 %

95% fid. limits : 10.0 - 20.0 %

Comments : Lethal

TOXICITY TEST PARAMETERS

Sample Number: 03900042

TEST CONC. %	ELAPSED TIME									
		00:00	01:00	02:00	04:00	24:00	48:00	72:00	96:00	
100	pH	11.9	11.9							
	O2 ppm	7.0	7.0							
	Cond.	3890	3890							
	Temp(C)	15.0	15.0							
40	pH	10.5		10.5						
	O2 ppm	7.2		7.2						
	Cond.	1451		1451						
	Temp(C)	15.0	15.0	15.0						
20	pH	9.5				9.0				
	O2 ppm	7.5				8.7				
	Cond.	887				889				
	Temp(C)	15.0	15.0	15.0	15.0	15.0				
10	pH	8.7								8.3
	O2 ppm	8.0								9.7
	Cond.	694								666
	Temp(C)	15.0	15.0	15.0	15.0	15.0	14.0	14.0	14.0	
5	pH	8.6								8.3
	O2 ppm	8.4								9.8
	Cond.	640								608
	Temp(C)	15.0	15.0	15.0	15.0	15.0	14.0	14.0	14.0	
1	pH	8.1								8.5
	O2 ppm	8.6								10.2
	Cond.	574								537
	Temp(C)	15.0	15.0	15.0	15.0	15.0	14.0	14.0	14.0	
Control	pH	7.9								8.4
	O2 ppm	8.4								10.0
	Cond.	559								523
	Temp(C)	15.0	15.0	15.0	15.0	15.0	14.0	14.0	14.0	

MISA Trout

SLOPE of Mortality Curve : 5.7
LC50 Calculated By : Probit

TOXICITY TEST REPORT

Sample: 03900163

TEST CONDITIONS

Company : Courtaulds Fibres Canada
Cornwall, ONT
(1900000)
Region : Southeast
Industry : Organic Chemical
Control point : process effluent, (300)
Laboratory : BAR
Sampling Method : Grab
Sampled By : M. Pelletier
Date Collected : 02/27/90
Received : 03/01/90
Tested : 03/02/90 at: 1400
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E							TOTAL MORTALITY
	%	00:00	01:00	02:00	24:00	48:00	72:00	96:00
100	0	10	10	10	10	10	10	100
65	0	10	10	10	10	10	10	100
40	0	0	0	10	10	10	10	100
20	0	0	0	5	5	5	5	50
10	0	0	0	0	1	1	1	10
5	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0

96 Hour LC50 : 18.4 %

95% fid. limits : 13.7 - 24.6 %

Comments :

TOXICITY TEST PARAMETERS

Sample Number: 03900163

TEST CONC. %	E L A P S E D T I M E							
		00:00	01:00	02:00	24:00	48:00	72:00	96:00
100	pH	11.9	11.9					
	O2 ppm	7.0	7.0					
	Cond.	5870	5870					
	Temp(C)	15.0	14.5					
65	pH	11.5	11.5					
	O2 ppm	7.2	7.2					
	Cond.	3720	3720					
	Temp(C)	15.0	14.5					
40	pH	10.5			10.4			
	O2 ppm	7.3			8.4			
	Cond.	2270			2270			
	Temp(C)	15.0	14.5	14.5	14.5			
20	pH	9.6			9.4			
	O2 ppm	7.5			8.5			
	Cond.	1307			1293			
	Temp(C)	15.0	14.5	14.5	14.5	14.5	14.5	14.5
10	pH	9.0						8.8
	O2 ppm	8.0						9.2
	Cond.	894						903
	Temp(C)	15.0	14.5	14.5	14.5	14.5	14.5	14.5
5	pH	8.8						8.7
	O2 ppm	8.2						9.1
	Cond.	734						742
	Temp(C)	15.0	14.5	14.5	14.5	14.5	14.5	14.5
Control	pH	7.9						8.5
	O2 ppm	8.3						9.1
	Cond.	544						549
	Temp(C)	15.0	14.5	14.5	14.5	14.5	14.5	14.5

TOXICITY TEST REPORT

Sample: 03900229

TEST CONDITIONS

Company : Courtaulds Fibres Canada
Cornwall, ONT
(1900000)
Region : Southeast
Industry : Organic Chemical
Control point : process effluent, (300)
Laboratory : BAR
Sampling Method : Grab
Sampled By : M. Pelletier
Date Collected : 03/20/90
Received : 03/22/90
Tested : 03/22/90 at: 1320
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E								TOTAL MORTALITY
	%	00:00	01:00	02:00	04:00	24:00	48:00	72:00	96:00
100	0	10	10	10	10	10	10	10	100
65	0	10	10	10	10	10	10	10	100
40	0	0	0	6	10	10	10	10	100
20	0	0	0	0	10	10	10	10	100
10	0	0	0	0	1	1	1	1	10
5	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0

96 Hour LC50 : 12.6 %

95% fid. limits : 9.4 - 16.9 %

Comments : Lethal

TOXICITY TEST PARAMETERS

Sample Number: 03900229

TEST CONC. %	E L A P S E D T I M E							
		00:00	01:00	02:00	04:00	24:00	48:00	72:00
100	pH	11.8	11.8					
	O2 ppm	7.3	7.3					
	Cond.	5090	5090					
	Temp(C)	15.0	14.5					
65	pH	11.3	11.3					
	O2 ppm	7.4	7.4					
	Cond.	2650	2650					
	Temp(C)	15.0	14.5					
40	pH	10.6			10.6			
	O2 ppm	7.4			7.4			
	Cond.	1810			1810			
	Temp(C)	15.0	14.5	14.5	14.5	14.5		
20	pH	9.7				9.5		
	O2 ppm	7.3				9.5		
	Cond.	1076				1052		
	Temp(C)	15.0	14.5	14.5	14.5	14.5		
10	pH	9.2						8.4
	O2 ppm	7.2						9.5
	Cond.	822						737
	Temp(C)	15.0	14.5	14.5	14.5	14.5	14.5	15.0
5	pH	8.9						8.4
	O2 ppm	7.2						9.5
	Cond.	688						650
	Temp(C)	15.0	14.5	14.5	14.5	14.5	14.5	15.0
Control	pH	7.9						8.6
	O2 ppm	7.4						9.8
	Cond.	549						519
	Temp(C)	15.0	14.5	14.5	14.5	14.5	14.5	15.0

TOXICITY TEST REPORT

Sample: 03890223

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (500)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : L. Lortie
 Date Collected : 10/18/89
 Received : 10/19/89
 Tested : 10/19/89 at: 1800
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal
 95% fid. limits : 0.0 - 0.0 %
 Comments : Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890223

TEST CONC. %	ELAPSED TIME					
	00:00	04:00	24:00	48:00	72:00	96:00

Control	pH	7.8				8.5
	O2 ppm	8.1				8.6
	Cond.	572				559
	Temp(C)	14.0	14.5	15.0	15.0	15.5
100	pH	7.8				8.0
	O2 ppm	8.7				9.0
	Cond.	456				463
	Temp(C)	14.0	14.5	15.0	15.0	15.5

TOXICITY TEST REPORT

Sample: 03890298

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical

Control point : combined effluent, (500)

Laboratory : BAR
 Sampling Method : Grab
 Sampled By : L. Lortie
 Date Collected : 11/22/89
 Received : 11/23/89
 Tested : 11/24/89 at: 1530

Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
	%	00:00	04:00	24:00	48:00	72:00	96:00
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890298

TEST CONC. %	ELAPSED TIME					
	00:00	04:00	24:00	48:00	72:00	96:00
Control	pH	7.9				8.6
	O2 ppm	9.1				9.5
	Cond.	560				553
	Temp(C)	14.5	14.5	14.5	14.5	15.0
10	pH	7.9				8.5
	O2 ppm	9.1				9.3
	Cond.	565				567
	Temp(C)	14.5	14.5	14.5	14.5	15.0
20	pH	7.9				8.5
	O2 ppm	9.2				9.2
	Cond.	562				564
	Temp(C)	14.5	14.5	14.5	14.5	15.0
40	pH	7.9				8.3
	O2 ppm	9.1				9.0
	Cond.	560				570
	Temp(C)	14.5	14.5	14.5	14.5	15.0
65	pH	7.8				8.3
	O2 ppm	9.1				9.3
	Cond.	552				568
	Temp(C)	14.5	14.5	14.5	14.5	15.0
100	pH	7.7				8.0
	O2 ppm	8.9				9.0
	Cond.	545				564
	Temp(C)	14.5	14.5	14.5	14.5	15.0

MISA Trout

TOXICITY TEST REPORT

Sample: 03890386

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical

Control point : combined effluent, (500)

Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Pelletier
 Date Collected : 12/19/89
 Received : 12/21/89
 Tested : 12/22/89 at: 1730

Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
	%	00:00	24:00	48:00	72:00	96:00
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890386

TEST E L A P S E D T I M E
 CONC. % 00:00 24:00 48:00 72:00 96:00

100	pH	7.8				8.1
	O2 ppm	9.5				9.1
	Cond.	453				456
	Temp(C)	15.0	14.0	14.0	14.0	14.0
65	pH	7.9				8.2
	O2 ppm	9.2				9.1
	Cond.	488				492
	Temp(C)	15.0	14.0	14.0	14.0	14.0
40	pH	7.8				8.4
	O2 ppm	9.0				8.7
	Cond.	512				504
	Temp(C)	15.0	14.0	14.0	14.0	14.0
20	pH	7.8				8.5
	O2 ppm	9.3				8.7
	Cond.	531				522
	Temp(C)	15.0	14.0	14.0	14.0	14.0
10	pH	7.8				8.4
	O2 ppm	8.9				8.9
	Cond.	541				536
	Temp(C)	15.0	14.0	14.0	14.0	14.0
5	pH	7.8				8.4
	O2 ppm	8.8				9.2
	Cond.	545				541
	Temp(C)	15.0	14.0	14.0	14.0	14.0
Control	pH	7.8				8.5
	O2 ppm	8.7				8.5
	Cond.	554				555
	Temp(C)	15.0	14.0	14.0	14.0	14.0

TOXICITY TEST REPORT

Sample: 03900043

TEST CONDITIONS

Company : Courtaulds Fibres Canada
Cornwall, ONT
(1900000)
Region : Southeast
Industry : Organic Chemical

Control point : combined effluent, (500)

Laboratory : BAR
Sampling Method : Grab
Sampled By : M. Pelletier
Date Collected : 01/16/90
Received : 01/18/90
Tested : 01/18/90 at: 1500

Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY	
	%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

TOXICITY TEST PARAMETERS

Sample Number: 03900043

TEST CONC.	E L A P S E D T I M E				
	%	00:00	24:00	48:00	72:00

100	pH	7.5				8.0
	O2 ppm	8.1				9.9
	Cond.	443				434
	Temp(C)	15.0	15.0	14.0	14.0	14.0
Control	pH	7.9				8.4
	O2 ppm	8.3				9.9
	Cond.	550				523
	Temp(C)	15.0	15.0	14.0	14.0	14.0

MISA Trout

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST REPORT

Sample: 03900164

TEST CONDITIONS

Company : Courtaulds Fibres Canada
Cornwall, ONT
(1900000)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (500)
Laboratory : BAR
Sampling Method : Grab
Sampled By : M. Pelletier
Date Collected : 02/27/90
Received : 03/01/90
Tested : 03/02/90 at: 1400

Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test--Non-lethal

TOXICITY TEST PARAMETERS

Sample Number: 03900164

TEST CONC. %	ELAPSED TIME				
	00:00	24:00	48:00	72:00	96:00
100	pH 7.6				8.1
	O2 ppm 8.2				9.8
	Cond. 413				421
	Temp(C) 14.5	14.5	14.0	14.0	14.5
100	pH 7.6				8.1
	O2 ppm 8.2				9.9
	Cond. 413				423
	Temp(C) 14.5	14.5	14.0	14.0	14.5
Control	pH 7.9				8.4
	O2 ppm 8.1				9.8
	Cond. 544				532
	Temp(C) 14.5	14.5	14.0	14.0	14.5
Control	pH 7.9				8.4
	O2 ppm 8.1				9.6
	Cond. 544				539
	Temp(C) 14.5	14.5	14.0	14.0	14.5

TOXICITY TEST REPORT

Sample: 03900230

TEST CONDITIONS

Company : Courtaulds Fibres Canada
Cornwall, ONT
(1900000)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (500)
Laboratory : BAR
Sampling Method : Grab
Sampled By : M. Pelletier
Date Collected : 03/20/90
Received : 03/22/90
Tested : 03/22/90 at: 1615
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
	%	00:00	24:00	48:00	72:00 96:00	
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	1	1	1	1	10
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test; Non lethal

TOXICITY TEST PARAMETERS

Sample Number: 03900230

TEST CONC. %	ELAPSED TIME				
		00:00	24:00	48:00	72:00 96:00
100	pH	7.8			7.9
	O2 ppm	8.9			8.9
	Cond.	456			461
	Temp(C)	15.0	14.0	14.5	14.5 15.0
100	pH	7.8			7.9
	O2 ppm	8.9			8.9
	Cond.	456			461
	Temp(C)	15.0	14.0	14.5	14.5 15.0
Control	pH	7.9			8.5
	O2 ppm	8.3			9.4
	Cond.	549			523
	Temp(C)	15.0	14.0	14.5	14.5 15.0
Control	pH	7.9			8.5
	O2 ppm	8.3			9.4
	Cond.	549			523
	Temp(C)	15.0	14.0	14.5	14.5 15.0

TOXICITY TEST REPORT

Sample: 03890224

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)

Region : Southeast

Industry : Organic Chemical

Control point : combined effluent, (600)

Laboratory : BAR

Sampling Method : Grab

Sampled By : L. Lortie

Date Collected : 10/18/89

Received : 10/19/89

Tested : 10/19/89 at: 1800

Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout

Weight(gm) :

Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	1	1	10

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890224

TEST ELAPSED TIME
 CONC. % 00:00 04:00 24:00 48:00 72:00 96:00

Control	pH	7.8					8.4
	O2 ppm	8.1					9.3
	Cond.	572					541
	Temp(C)	14.0	15.0	15.0	15.0	15.0	15.5
10	pH	7.8					8.3
	O2 ppm	8.3					9.4
	Cond.	623					609
	Temp(C)	14.0	15.0	15.0	15.0	15.0	15.5
20	pH	7.7					8.3
	O2 ppm	8.3					9.4
	Cond.	676					668
	Temp(C)	14.0	15.0	15.0	15.0	15.0	15.5
40	pH	7.6					8.2
	O2 ppm	8.7					9.5
	Cond.	795					793
	Temp(C)	14.0	15.0	15.0	15.0	15.0	15.5
65	pH	7.5					8.0
	O2 ppm	8.9					9.0
	Cond.	959					956
	Temp(C)	14.0	15.0	15.0	15.0	15.0	15.5
100	pH	7.1					7.9
	O2 ppm	9.3					9.4
	Cond.	1198					1190
	Temp(C)	14.0	15.0	15.0	15.0	15.0	15.5

TOXICITY TEST REPORT

Sample: 03890299

TEST CONDITIONS

Company : Courtaulds Fibres Canada
Cornwall, ONT
(1900000)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (600)
Laboratory : BAR
Sampling Method : Grab
Sampled By : L. Lortie
Date Collected : 11/22/89
Received : 11/23/89
Tested : 11/24/89 at: 1200
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E						TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

TOXICITY TEST PARAMETERS

Sample Number: 03890299

TEST CONC. %	E L A P S E D T I M E					
	00:00	04:00	24:00	48:00	72:00	96:00

Control	pH	7.8				8.2
	O2 ppm	7.9				8.7
	Cond.	562				578
	Temp(C)	14.5	14.5	14.5	14.5	15.0
10	pH	7.7				8.4
	O2 ppm	7.9				9.0
	Cond.	698				708
	Temp(C)	14.5	14.5	14.5	14.5	15.0
20	pH	7.7				8.3
	O2 ppm	8.0				8.9
	Cond.	861				853
	Temp(C)	14.5	14.5	14.5	14.5	15.0
40	pH	7.7				8.4
	O2 ppm	8.1				9.1
	Cond.	1112				1132
	Temp(C)	14.5	14.5	14.5	14.5	15.0
65	pH	7.6				8.2
	O2 ppm	7.9				9.1
	Cond.	1451				1473
	Temp(C)	14.5	14.5	14.5	14.5	15.0
100	pH	7.3				8.0
	O2 ppm	7.9				9.1
	Cond.	1911				1950
	Temp(C)	14.5	14.5	14.5	14.5	15.0

MISA Trout

TOXICITY TEST REPORT

Sample: 03890387

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (600)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Pelletier
 Date Collected : 12/19/89
 Received : 12/21/89
 Tested : 12/22/89 at: 1730
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890387

TEST CONC. %	E L A P S E D T I M E					
		00:00	24:00	48:00	72:00	96:00
100	pH	7.5				8.2
	O2 ppm	9.5				9.4
	Cond.	433				432
	Temp(C)	15.0	14.0	14.0	14.0	14.5
65	pH	7.7				8.3
	O2 ppm	9.2				9.3
	Cond.	473				468
	Temp(C)	15.0	14.0	14.0	14.0	14.5
40	pH	7.8				8.5
	O2 ppm	9.0				9.2
	Cond.	508				497
	Temp(C)	15.0	14.0	14.0	14.0	14.5
20	pH	7.8				8.6
	O2 ppm	8.9				9.0
	Cond.	534				520
	Temp(C)	15.0	14.0	14.0	14.0	14.5
10	pH	7.8				8.5
	O2 ppm	8.8				8.9
	Cond.	545				522
	Temp(C)	15.0	14.0	14.0	14.0	14.5
5	pH	7.8				8.5
	O2 ppm	8.7				9.3
	Cond.	551				530
	Temp(C)	15.0	14.0	14.0	14.0	14.5
Control	pH	7.8				8.5
	O2 ppm	8.8				9.0
	Cond.	554				533
	Temp(C)	15.0	14.0	14.0	14.0	14.5

TOXICITY TEST REPORT

Sample: 03900044

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (600)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Pelletier
 Date Collected : 01/16/90
 Received : 01/18/90
 Tested : 01/19/90 at: 900
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	2	8	16	16	80
Control	0	0	0	0	0	0

96 Hour LC50 : >100%
 95% fid. limits : 0.0 - 0.0 %
 Comments : Single Concentration Test

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900044

TEST CONC. %	E L A P S E D T I M E				
	00:00	24:00	48:00	72:00	96:00

100	pH	7.1		8.0	
	O2 ppm	8.7		9.2	
	Cond.	632		634	
	Temp(C)	15.0	14.0	14.0	14.0
Control	pH	7.9		8.5	
	O2 ppm	8.3		9.1	
	Cond.	560		543	
	Temp(C)	15.0	14.0	14.0	14.0

TOXICITY TEST REPORT

Sample: 03900165

TEST CONDITIONS

Company : Courtaulds Fibres Canada
Cornwall, ONT
(1900000)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (600)
Laboratory : BAR
Sampling Method : Grab
Sampled By : M. Pelletier
Date Collected : 02/27/90
Received : 03/01/90
Tested : 03/02/90 at: 1500
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

TOXICITY TEST PARAMETERS

Sample Number: 03900165

TEST CONC.	ELAPSED TIME				
	%	00:00	24:00	48:00	72:00

100	pH	7.3				8.0
	O2 ppm	8.9				9.8
	Cond.	1895				1944
	Temp(C)	14.5	14.5	14.0	14.0	14.0
65	pH	7.6				8.3
	O2 ppm	8.9				9.9
	Cond.	1431				1474
	Temp(C)	14.5	14.5	14.0	14.0	14.0
40	pH	7.7				8.3
	O2 ppm	8.7				9.8
	Cond.	1098				1121
	Temp(C)	14.5	14.5	14.0	14.0	14.0
20	pH	7.8				8.4
	O2 ppm	8.5				9.7
	Cond.	812				828
	Temp(C)	14.5	14.5	14.0	14.0	14.0
10	pH	8.0				8.5
	O2 ppm	8.4				9.8
	Cond.	680				688
	Temp(C)	14.5	14.5	14.0	14.0	14.0
5	pH	7.9				8.4
	O2 ppm	8.3				9.7
	Cond.	613				620
	Temp(C)	14.5	14.5	14.0	14.0	14.0
Control	pH	7.9				8.4
	O2 ppm	8.2				9.6
	Cond.	544				556
	Temp(C)	14.5	14.5	14.0	14.0	14.0

TOXICITY TEST REPORT

Sample: 03900231

TEST CONDITIONS

Company : Courtaulds Fibres Canada
Cornwall, ONT
(1900000)

Region : Southeast

Industry : Organic Chemical

Control point : combined effluent, (600)

Laboratory : BAR

Sampling Method : Grab

Sampled By : M. Pelletier

Date Collected : 03/20/90

Received : 03/22/90

Tested : 03/22/90 at: 1620

Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout

Weight(gm) :

Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY	
	%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900231

TEST CONC. %	ELAPSED TIME				
	00:00	24:00	48:00	72:00	96:00

100	pH	7.1				8.1
	O2 ppm	9.3				9.6
	Cond.	572				562
	Temp(C)	15.0	14.0	14.5	14.5	15.0
65	pH	7.5				8.2
	O2 ppm	9.2				9.4
	Cond.	561				558
	Temp(C)	15.0	14.0	14.5	14.5	15.0
40	pH	7.7				8.4
	O2 ppm	9.4				9.5
	Cond.	556				547
	Temp(C)	15.0	14.0	14.5	14.5	15.0
20	pH	7.8				8.4
	O2 ppm	9.3				9.4
	Cond.	549				541
	Temp(C)	15.0	14.0	14.5	14.5	15.0
10	pH	7.9				8.4
	O2 ppm	8.9				9.4
	Cond.	546				530
	Temp(C)	15.0	14.0	14.5	14.5	15.0
5	pH	7.9				8.3
	O2 ppm	8.7				8.8
	Cond.	543				543
	Temp(C)	15.0	14.0	14.5	14.5	15.0
Control	pH	7.9				8.5
	O2 ppm	8.6				9.4
	Cond.	543				528
	Temp(C)	15.0	14.0	14.5	14.5	15.0

TOXICITY TEST REPORT

Sample: 03890225

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (700)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : L. Lortie
 Date Collected : 10/18/89
 Received : 10/19/89
 Tested : 10/19/89 at: 1800

Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890225

TEST CONC. %	ELAPSED TIME					
	00:00	04:00	24:00	48:00	72:00	96:00

Control	pH	7.7				8.3
	O2 ppm	7.9				9.4
	Cond.	571				561
	Temp(C)	14.0	15.0	15.0	15.0	15.5
5	pH					8.3
	O2 ppm					9.2
	Cond.					561
	Temp(C)	14.0	15.0	15.0	15.0	15.5
10	pH	7.6				8.4
	O2 ppm	7.7				9.5
	Cond.	567				553
	Temp(C)	14.0	15.0	15.0	15.0	15.5
25	pH	7.7				8.3
	O2 ppm	7.5				9.5
	Cond.	553				553
	Temp(C)	14.0	15.0	15.0	15.0	15.5
50	pH	7.5				8.2
	O2 ppm	8.1				9.5
	Cond.	542				547
	Temp(C)	14.0	15.0	15.0	15.0	15.5
100	pH	7.1				7.7
	O2 ppm	8.3				9.3
	Cond.	538				541
	Temp(C)	14.0	15.0	15.0	15.0	15.5

TOXICITY TEST REPORT

Sample: 01890273

TEST CONDITIONS

Company : Courtaulds Fibres Canada
Cornwall, ONT
(1900000)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (700)
Laboratory : MOE
Sampling Method : grab
Sampled By : J. Lebow
Date Collected : 11/21/89
Received : 11/23/89
Tested : 11/24/89 at: 1000
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME										TOTAL MORTALITY
%	00:00	00:30	01:00	02:00	04:00	24:00	48:00	72:00	96:00	%	
100	0	0	0	0	0	1	6	7	8	80	
65	0	0	0	0	0	1	7	8	8	80	
40	0	0	0	0	0	0	1	2	2	20	
30	0	0	0	0	0	0	0	1	2	20	
20	0	0	0	0	0	0	0	3	4	40	
10	0	0	0	0	0	0	0	2	3	30	
Control	0	0	0	0	0	0	0	0	0	0	

96 Hour LC50 : 53.0 %

95% fid. limits : 36.8 - 79.4 %

Comments : MISA audit sample.

TOXICITY TEST PARAMETERS

Sample Number: 01890273

TEST CONC. %	ELAPSED TIME									
	00:00	00:30	01:00	02:00	04:00	24:00	48:00	72:00	96:00	
100	pH	5.4				7.1	7.4	7.4	7.2	7.
	O2 ppm	10.5				9.6	10.7	11.0	9.9	9.
	Cond.	480				500	485	500	520	52
	Temp(C)	11.7				14.0	14.0	14.0	14.0	14.
65	pH					7.3	7.6	7.5	7.4	7.
	O2 ppm					9.8	10.7	11.0	9.9	9.
	Cond.					400	400	395	420	42
	Temp(C)					14.0	14.0	14.0	14.0	14.
40	pH					7.3	7.6	7.5	7.5	8.
	O2 ppm					9.6	10.9	11.1	10.1	9.
	Cond.					360	350	345	360	36
	Temp(C)					14.0	14.0	14.0	14.0	14.
30	pH					7.3	7.6	7.6	7.6	8.
	O2 ppm					9.4	10.7	11.0	9.4	9.
	Cond.					330	320	300	320	30
	Temp(C)					14.0	14.0	14.0	14.0	14.
20	pH					7.2	7.7	7.6	7.6	8.
	O2 ppm					9.5	10.8	11.1	10.0	9.
	Cond.					290	290	295	310	28
	Temp(C)					14.0	14.0	14.0	14.0	14.
10	pH					7.0	7.8	7.6	7.7	7.
	O2 ppm					9.3	10.9	11.0	9.9	8.
	Cond.					270	265	270	275	25
	Temp(C)					14.0	14.0	14.0	14.0	14.
Control	pH					7.0	7.7	7.6	7.8	7.
	O2 ppm					9.4	10.6	10.8	9.8	8.
	Cond.					260	245	245	255	25
	Temp(C)					14.0	14.0	14.0	14.0	14.

MISA Trout

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST REPORT

Sample: 03890300

TEST CONDITIONS

Company : Courtaulds Fibres Canada
Cornwall, ONT
(1900000)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (700)
Laboratory : BAR
Sampling Method : Grab
Sampled By : L. Lortie
Date Collected : 11/22/89
Received : 11/23/89
Tested : 11/24/89 at: 1500
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E						TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0					0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

TOXICITY TEST PARAMETERS

Sample Number: 03890300

TEST CONC. %	E L A P S E D T I M E					
	00:00	04:00	24:00	48:00	72:00	96:00
Control	pH 7.8 O2 ppm 9.2 Cond. 564 Temp(C) 14.5		14.5	14.5	14.5	15.0 8.5 9.4 566 15.0
10	pH 7.7 O2 ppm 9.1 Cond. 568 Temp(C) 14.5		14.5	14.5	14.5	15.0 8.4 9.3 575 15.0
20	pH 7.6 O2 ppm 9.2 Cond. 574 Temp(C) 14.5		14.5	14.5	14.5	15.0 8.4 9.3 581 15.0
40	pH 7.5 O2 ppm 9.4 Cond. 594 Temp(C) 14.5		14.5	14.5	14.5	15.0 8.4 9.4 600 15.0
65	pH 7.2 O2 ppm 9.6 Cond. 604 Temp(C) 14.5		14.5	14.5	14.5	15.0 8.3 9.4 620 15.0
100	error					

TOXICITY TEST REPORT

Sample: 03890388

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (700)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Pelletier
 Date Collected : 12/19/89
 Received : 12/21/89
 Tested : 12/22/89 at: 1730
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890388

TEST CONC. %	ELAPSED TIME				
	00:00	24:00	48:00	72:00	96:00

100	pH	7.6				8.1
	O2 ppm	9.5				9.0
	Cond.	424				432
	Temp(C)	15.0	14.0	14.0	14.0	14.5
65	pH	7.7				8.2
	O2 ppm	9.3				8.7
	Cond.	470				473
	Temp(C)	15.0	14.0	14.0	14.0	14.5
40	pH	7.8				8.1
	O2 ppm	9.1				8.6
	Cond.	502				506
	Temp(C)	15.0	14.0	14.0	14.0	14.5
20	pH	7.9				8.5
	O2 ppm	8.9				8.7
	Cond.	528				524
	Temp(C)	15.0	14.0	14.0	14.0	14.5
10	pH	7.9				8.5
	O2 ppm	8.8				9.1
	Cond.	540				529
	Temp(C)	15.0	14.0	14.0	14.0	14.5
5	pH	7.9				8.5
	O2 ppm	8.8				8.8
	Cond.	550				525
	Temp(C)	15.0	14.0	14.0	14.0	14.5
Control	pH	7.9				8.5
	O2 ppm	8.9				9.0
	Cond.	552				533
	Temp(C)	15.0	14.0	14.0	14.0	14.5

MISA Trout

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST REPORT

Sample: 03900045

TEST CONDITIONS

Company : Courtaulds Fibres Canada
Cornwall, ONT
(1900000)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (700)
Laboratory : BAR
Sampling Method : Grab
Sampled By : M. Pelletier
Date Collected : 01/16/90
Received : 01/18/90
Tested : 01/19/90 at: 900
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments : Non-lethal

TOXICITY TEST PARAMETERS

Sample Number: 03900045

TEST CONC. %	E L A P S E D T I M E				
	00:00	24:00	48:00	72:00	96:00
100	pH	7.5			8.1
	O2 ppm	8.9			9.3
	Cond.	400			412
	Temp(C)	15.0	14.0	14.0	14.0
Control	pH	7.9			8.5
	O2 ppm	8.3			9.2
	Cond.	550			533
	Temp(C)	15.0	14.0	14.0	14.0

TOXICITY TEST REPORT

Sample: 03900166

TEST CONDITIONS

Company : Courtaulds Fibres Canada
Cornwall, ONT
(1900000)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (700)
Laboratory : BAR
Sampling Method : Grab
Sampled By : M. Pelletier
Date Collected : 02/27/90
Received : 03/01/90
Tested : 03/02/90 at: 1400
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test--Non-lethal

TOXICITY TEST PARAMETERS

Sample Number: 03900166

TEST CONC. %	ELAPSED TIME				
	00:00	24:00	48:00	72:00	96:00
100	pH	6.6			7.8
	O2 ppm	9.0			9.9
	Cond.	644			654
	Temp(C)	14.5	14.5	14.5	14.0
100	pH	6.6			7.8
	O2 ppm	9.0			9.9
	Cond.	644			654
	Temp(C)	14.5	14.5	14.5	14.0
Control	pH	7.9			8.4
	O2 ppm	8.2			9.8
	Cond.	544			524
	Temp(C)	14.5	14.5	14.5	14.0
Control	pH	7.9			8.4
	O2 ppm	8.2			9.8
	Cond.	544			517
	Temp(C)	14.5	14.5	14.5	14.0

TOXICITY TEST REPORT

Sample: 03900232

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (700)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Pelletier
 Date Collected : 03/20/90
 Received : 03/22/90
 Tested : 03/22/90 at: 1625
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal
 95% fid. limits : 0.0 - 0.0 %
 Comments : Single Concentration Test; Non lethal

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900232

TEST CONC. %	ELAPSED TIME				
	00:00	24:00	48:00	72:00	96:00

100	pH	7.3				8.0
	O2 ppm	9.7				9.2
	Cond.	451				452
	Temp(C)	15.0	14.0	14.5	14.5	15.0
100	pH	7.3				8.0
	O2 ppm	9.7				9.2
	Cond.	451				452
	Temp(C)	15.0	14.0	14.5	14.5	15.0
Control	pH	7.9				8.4
	O2 ppm	8.7				9.2
	Cond.	550				530
	Temp(C)	15.0	14.0	14.5	14.5	15.0
Control	pH	7.9				8.4
	O2 ppm	8.7				9.2
	Cond.	550				530
	Temp(C)	15.0	14.0	14.5	14.5	15.0

TOXICITY TEST REPORT

Sample: 03890226

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (800)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : L. Lortie
 Date Collected : 10/18/89
 Received : 10/19/89
 Tested : 10/19/89 at: 1800
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E						TOTAL MORTALITY	
	%	00:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890226

TEST ELAPSED TIME
 CONC. % 00:00 04:00 24:00 48:00 72:00 96:00

Control	pH	7.7					8.4
	O2 ppm	8.2					9.4
	Cond.	572					545
	Temp(C)	14.0	14.0	15.0	15.0	15.0	15.5
10	pH	7.7					8.3
	O2 ppm	8.3					9.4
	Cond.	560					549
	Temp(C)	14.0	14.0	15.0	15.0	15.0	15.5
20	pH	7.7					8.3
	O2 ppm	8.3					9.5
	Cond.	562					547
	Temp(C)	14.0	14.0	15.0	15.0	15.0	15.5
40	pH	7.6					8.0
	O2 ppm	8.6					8.9
	Cond.	555					546
	Temp(C)	14.0	14.0	15.0	15.0	15.0	15.5
65	pH	7.4					8.2
	O2 ppm	8.8					9.0
	Cond.	546					542
	Temp(C)	14.0	14.0	15.0	15.0	15.0	15.5
100	pH	7.1					7.7
	O2 ppm	9.5					9.1
	Cond.	541					536
	Temp(C)	14.0	14.0	15.0	15.0	15.0	15.5

TOXICITY TEST REPORT

Sample: 03890301

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (800)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : L. Lortie
 Date Collected : 11/22/89
 Received : 11/23/89
 Tested : 11/24/89 at: 1200
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	10	10	10	100

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890301

TEST CONC. %	ELAPSED TIME					
	00:00	04:00	24:00	48:00	72:00	96:00
Control	pH 7.8 O2 ppm 8.1 Cond. 560 Temp(C) 14.5	14.5	14.5	14.5	15.0	8.4 9.3 542 15.0
10	pH 7.7 O2 ppm 8.1 Cond. 563 Temp(C) 14.5	14.5	14.5	14.5	15.0	8.5 9.2 572 15.0
20	pH 7.6 O2 ppm 8.2 Cond. 571 Temp(C) 14.5	14.5	14.5	14.5	15.0	8.5 9.3 579 15.0
40	pH 7.5 O2 ppm 8.3 Cond. 588 Temp(C) 14.5	14.5	14.5	14.5	15.0	8.4 9.3 602 15.0
65	pH 7.3 O2 ppm 8.6 Cond. 617 Temp(C) 14.5	14.5	14.5	14.5	15.0	8.2 9.2 628 15.0
100	pH 6.8 O2 ppm 8.8 Cond. 660 Temp(C) 14.5	14.5	14.5	14.5	15.0	7.8 9.3 671 15.0

TOXICITY TEST REPORT

Sample: 03890389

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (800)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Pelletier
 Date Collected : 12/19/89
 Received : 12/21/89
 Tested : 12/22/89 at: 1730
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890389

TEST CONC. %	ELAPSED TIME				
	00:00	24:00	48:00	72:00	96:00

100	pH	7.6			8.2
	O2 ppm	9.5			9.1
	Cond.	431			431
	Temp(C)	15.0	14.0	14.0	14.0
65	pH	7.7			8.4
	O2 ppm	9.3			9.3
	Cond.	473			468
	Temp(C)	15.0	14.0	14.0	14.0
40	pH	7.7			8.5
	O2 ppm	9.0			9.0
	Cond.	564			492
	Temp(C)	15.0	14.0	14.0	14.0
20	pH	7.9			8.5
	O2 ppm	8.9			9.2
	Cond.	530			516
	Temp(C)	15.0	14.0	14.0	14.0
10	pH	7.9			8.5
	O2 ppm	8.8			8.9
	Cond.	543			513
	Temp(C)	15.0	14.0	14.0	14.0
5	pH	7.9			8.5
	O2 ppm	8.7			8.8
	Cond.	551			520
	Temp(C)	15.0	14.0	14.0	14.0
Control	pH	7.9			8.5
	O2 ppm	8.8			8.5
	Cond.	554			525
	Temp(C)	15.0	14.0	14.0	14.0

MISA Trout

TOXICITY TEST REPORT

Sample: 03900046

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (800)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Pelletier
 Date Collected : 01/16/90
 Received : 01/18/90
 Tested : 01/18/90 at: 1500
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
	%	00:00	24:00	48:00	72:00	
100	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal
 95% fid. limits : 0.0 - 0.0 %
 Comments : Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900046

TEST CONC.	%	ELAPSED TIME				
		00:00	24:00	48:00	72:00	96:00
100	pH	6.8				7.8
	O2 ppm	9.3				9.8
	Cond.	537				521
	Temp(C)	15.0	15.0	14.0	14.0	14.0
Control	pH	7.9				8.4
	O2 ppm	8.3				9.9
	Cond.	550				522
	Temp(C)	15.0	15.0	14.0	14.0	14.0

TOXICITY TEST REPORT

Sample: 03900167

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (800)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Pelletier
 Date Collected : 02/27/90
 Received : 03/01/90
 Tested : 03/02/90 at: 1400
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal
 95% fid. limits : 0.0 - 0.0 %
 Comments : Single Concentration Test--Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900167

TEST CONC.	ELAPSED TIME					
%	00:00	24:00	48:00	72:00	96:00	
100	pH	6.6				7.7
	O2 ppm	9.3				9.8
	Cond.	614				618
	Temp(C)	14.5	14.5	14.0	14.0	14.0
100	pH	6.6				7.8
	O2 ppm	9.3				9.9
	Cond.	614				625
	Temp(C)	14.5	14.5	14.0	14.0	14.0
Control	pH	7.9				8.5
	O2 ppm	8.3				9.9
	Cond.	544				541
	Temp(C)	14.5	14.5	14.0	14.0	14.0
Control	pH	7.9				8.5
	O2 ppm	8.3				9.8
	Cond.	544				536
	Temp(C)	14.5	14.5	14.0	14.0	14.0

TOXICITY TEST REPORT

Sample: 03900233

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (800)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Pelletier
 Date Collected : 03/20/90
 Received : 03/22/90
 Tested : 03/22/90 at: 1630
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal
 95% fid. limits : 0.0 - 0.0 %
 Comments : Single Concentration Test; Non lethal

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900233

TEST CONC. %	ELAPSED TIME				
	00:00	24:00	48:00	72:00	96:00
100	pH	7.3			8.1
	O2 ppm	9.4			9.3
	Cond.	431			439
	Temp(C)	15.0	14.0	14.5	14.5
100	pH	7.3			8.1
	O2 ppm	9.4			9.3
	Cond.	431			439
	Temp(C)	15.0	14.0	14.5	14.5
Control	pH	7.9			8.4
	O2 ppm	8.6			9.3
	Cond.	548			532
	Temp(C)	15.0	14.0	14.5	14.5
Control	pH	7.9			8.4
	O2 ppm	8.6			9.3
	Cond.	548			532
	Temp(C)	15.0	14.0	14.5	14.5

TOXICITY TEST REPORT

Sample: 03890302

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : intake water, (1300)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : L. Lortie
 Date Collected : 11/22/89
 Received : 11/23/89
 Tested : 11/24/89 at: 1200

Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E						TOTAL MORTALITY %
	%	00:00	04:00	24:00	48:00	72:00	96:00
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
 LC50 Calculated By :TOXICITY TEST PARAMETERS

Sample Number: 03890302

TEST CONC. %	E L A P S E D T I M E					
	00:00	04:00	24:00	48:00	72:00	96:00

Control	pH	7.8					8.1
	O2 ppm	7.8					8.4
	Cond.	563					576
	Temp(C)	14.5	14.5	14.5	14.5	15.0	15.0
10	pH	7.8					8.4
	O2 ppm	7.8					9.2
	Cond.	547					555
	Temp(C)	14.5	14.5	14.5	14.5	15.0	15.0
20	pH	7.8					8.3
	O2 ppm	7.8					8.9
	Cond.	527					536
	Temp(C)	14.5	14.5	14.5	14.5	15.0	15.0
40	pH	7.8					8.4
	O2 ppm	8.1					9.1
	Cond.	481					494
	Temp(C)	14.5	14.5	14.5	14.5	15.0	15.0
65	pH	7.9					8.1
	O2 ppm	8.2					9.0
	Cond.	439					450
	Temp(C)	14.5	14.5	14.5	14.5	15.0	15.0
100	pH	9.1					8.1
	O2 ppm	8.4					9.0
	Cond.	375					387
	Temp(C)	14.5	14.5	14.5	14.5	15.0	15.0

MISA Trout

TOXICITY TEST REPORT

Sample: 03890390

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : intake water, (1300)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Pelleteir
 Date Collected : 12/19/89
 Received : 12/21/89
 Tested : 12/22/89 at: 1730
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890390

TEST CONC. %	ELAPSED TIME				
	00:00	24:00	48:00	72:00	96:00
100	pH 8.0				8.1
	O2 ppm 9.7				9.5
	Cond. 355				472
	Temp(C) 15.0	14.0	14.0	14.0	14.5
65	pH 8.0				8.2
	O2 ppm 9.4				9.5
	Cond. 425				496
	Temp(C) 15.0	14.0	14.0	14.0	14.5
40	pH 7.9				8.3
	O2 ppm 9.2				9.7
	Cond. 474				519
	Temp(C) 15.0	14.0	14.0	14.0	14.5
20	pH 7.9				8.3
	O2 ppm 9.0				9.4
	Cond. 515				536
	Temp(C) 15.0	14.0	14.0	14.0	14.5
10	pH 7.9				8.4
	O2 ppm 9.0				9.6
	Cond. 533				543
	Temp(C) 15.0	14.0	14.0	14.0	14.5
5	pH 7.8				8.5
	O2 ppm 8.8				9.3
	Cond. 540				551
	Temp(C) 15.0	14.0	14.0	14.0	14.5
Control	pH 7.9				8.5
	O2 ppm 8.8				9.4
	Cond. 550				563
	Temp(C) 15.0	14.0	14.0	14.0	14.5

COMPANY: Courtaulds Fibres Canada, Cornwall
(1900000)
(now with Cornwall Plant)
SECTOR: Organic Chemical
REGION: Southeast

SUMMARY

Results for thirty-eight *Daphnia magna* acute lethality toxicity tests conducted on effluent samples collected between October 1989 and March 1990 were submitted by Courtaulds Fibres Canada of Cornwall. The samples from the various outfall points of this plant were either very toxic, or had low levels of acute toxicity. One sample of intake water collected in December was nonlethal, and one sample of storm water collected in October had an LC50 of 8.8%.

Sixteen of seventeen samples from combined effluents #500, 600 and 800 were either not acutely lethal to *Daphnia* (29% of samples) or had less than 4 test animals die during any one test. One sample from combined effluent #600 collected in January was acutely lethal to *Daphnia*, with an LC50 = 60.9%.

The samples from combined effluent #700 were more variable than all the others from this plant. Three samples were nonlethal, one sample had an LC50 > 100%, and two samples had LC50 values of 87.1 and 93.3%.

Samples from process effluents #100 and #300 are consistently acutely toxic. All twelve samples from these outfalls had LC50s < 8% effluent, and 11 of 12 samples had LC50s < 4%. Much of the toxicity from these outfalls can be attributed to the extremes in pH of the effluents. The acid sewer (#100) effluent consistently has pH values of 2, and the alkal sewer (#300) effluent consistently has pH > 11.5. At these pH levels *Daphnia* are killed within the first hour of exposure to 100% effluent concentrations.

Audit samples for combined effluents #100, 300, 500, 600, 700, and 800 were tested in the Ministry laboratory in November. The results were consistent with those submitted by the company.

process effluent

03890221 sampled: 10/18/89 LC50: 1.9 %
95% fid. limits: 1.4 - 2.5 % slope: 5.1
comments:

02890269 sampled: 11/21/89 LC50: 0.0 - 5.0 %
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit/ low pH, rapidly lethal

Courtaulds Fibres Canada (continued)

03890296 sampled: 11/22/89 LC50: 1.4 %
 95% fid. limits: 1.0 - 1.8 % slope: 5.1
 comments:

03890384 sampled: 12/19/89 LC50: 1.7 %
 95% fid. limits: 1.3 - 2.3 % slope: 7.3
 comments:

03900041 sampled: 01/16/90 LC50: 7.6 %
 95% fid. limits: 5.8 - 9.8 % slope: 5.5
 comments: Lethal

03900162 sampled: 02/27/90 LC50: 3.7 %
 95% fid. limits: 2.8 - 4.7 % slope: 5.8
 comments:

03900228 sampled: 03/20/90 LC50: 1.7 %
 95% fid. limits: 1.1 - 2.1 % slope: 5.6
 comments:

pr 200

03890227 sampled: 10/18/89 LC50: 8.8 %
 95% fid. limits: 6.7 - 11.4 % slope: 6.1
 comments:

process effluent

03890222 sampled: 10/18/89 LC50: 1.7 %
 95% fid. limits: 1.3 - 2.2 % slope: 4.7
 comments:

02890270 sampled: 11/21/89 LC50: 2.0 %
 95% fid. limits: 0.5 - 7.8 %
 comments: MISA Audit/high pH, low oxygen, rapidly leth.

03890297 sampled: 11/22/89 LC50: 3.0 %
 95% fid. limits: 2.4 - 3.7 % slope: 5.8
 comments:

03890385 sampled: 12/19/89 LC50: 1.1 %
 95% fid. limits: 0.7 - 1.6 % slope: 4.1
 comments:

03900042 sampled: 01/16/90 LC50: 0.9 %
 95% fid. limits: 0.4 - 1.5 % slope: 3.2
 comments: Lethal

03900163 sampled: 02/27/90 LC50: 2.1 %
 95% fid. limits: 1.5 - 3.0 %
 comments:

Courtaulds Fibres Canada (continued)

03900229 sampled: 03/20/90 LC50: 2.6 %
 95% fid. limits: 2.0 - 3.4 % slope: 6.1
 comments:

combined effluent

03890223 sampled: 10/18/89 non-lethal
 95% fid. limits: 0.0 - 0.0 %
 comments: Non-lethal

02890272 sampled: 11/21/89 LC50: >100 %
 95% fid. limits: 0.0 - 0.0 %
 comments: MISA Audit

03890298 sampled: 11/22/89 non-lethal
 95% fid. limits: 0.0 - 0.0 %
 comments: Non-lethal

03890386 sampled: 12/19/89 non-lethal
 95% fid. limits: 0.0 - 0.0 %
 comments: Non-lethal

03900043 sampled: 01/16/90 LC50: >100 %
 95% fid. limits: 0.0 - 0.0 %
 comments: LC50 >100

03900164 sampled: 02/27/90 non-lethal
 95% fid. limits: 0.0 - 0.0 %
 comments: Non-lethal

03900230 sampled: 03/20/90 LC50: >100 %
 95% fid. limits: 0.0 - 0.0 %
 comments: LC50 >100

combined effluent

03890224 sampled: 10/18/89 non-lethal
 95% fid. limits: 0.0 - 0.0 %
 comments: Non-lethal

02890268 sampled: 11/21/89 LC50: >100 %
 95% fid. limits: 0.0 - 0.0 %
 comments: MISA Audit/several floaters in 100% & 60%

03890299 sampled: 11/22/89 non-lethal
 95% fid. limits: 0.0 - 0.0 %
 comments: Non-lethal

03890387 sampled: 12/19/89 LC50: >100 %
 95% fid. limits: 0.0 - 0.0 %
 comments: LC50 >100

Courtaulds Fibres Canada (continued)

03900044 sampled: 01/16/90 LC50: 60.9 %
95% fid. limits: 35.9 - 103.0 % slope: 2.0
comments: Lethal

03900165 sampled: 02/27/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50>100

03900231 sampled: 03/20/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

combined effluent

03890225 sampled: 10/18/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

02890273 sampled: 11/21/89 LC50: 64.5 %
95% fid. limits: 51.9 - 80.1 %
comments: MISA Audit/

03890300 sampled: 11/22/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900045 sampled: 01/16/90 LC50: 93.3 %
95% fid. limits: 66.2 - 131.3 % slope: 3.6
comments: lethal

03900166 sampled: 02/27/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900232 sampled: 03/20/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

combined effluent

03890226 sampled: 10/18/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

02890271 sampled: 11/21/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

03890301 sampled: 11/22/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50>100

Courtaulds Fibres Canada (continued)

03890389 sampled: 12/19/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900046 sampled: 01/16/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 > 100

03900167 sampled: 02/27/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900233 sampled: 03/20/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

rain gauge

intake water

03890302 sampled: 11/22/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03890390 sampled: 12/19/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

TOXICITY TEST REPORT

Sample: 03890221

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : process effluent, (100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : L. Lortie
 Date Collected : 10/18/89
 Received : 10/19/89
 Tested : 10/19/89 at: 1500
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:00	%
Control	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0
3	0	0	0	0	3	10	83
5	0	0	0	0	9	12	100
10	0	0	0	11	12	12	100
100	0	12	12	12	12	12	100

48 Hour LC50 : 1.9 %

95% fid. limits : 1.4 - 2.5 %

Comments :

SLOPE of Mortality Curve : 5.1
 LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 03890221

TEST ELAPSED TIME
 CONC. % 00:00 01:00 02:00 04:00 24:00 48:00

Control	pH	8.4					8.3
	O2 ppm	9.5					9.4
	Cond.	294					295
	Temp(C)	21.0	20.0	20.0	20.0	20.0	19.5
1	pH	7.5					7.9
	O2 ppm	8.2					8.6
	Cond.	390					380
	Temp(C)	21.0	20.0	20.0	20.0	20.0	19.5
2	pH	7.0					7.6
	O2 ppm	8.2					8.4
	Cond.	531					522
	Temp(C)	21.0	20.0	20.0	20.0	20.0	19.5
5	pH	6.5					7.2
	O2 ppm	8.3					8.3
	Cond.	724					712
	Temp(C)	21.0	20.0	20.0	20.0	20.0	19.5
10	pH	4.2					4.7
	O2 ppm	8.4					9.1
	Cond.	1216					1163
	Temp(C)	21.0	20.0	20.0	20.0		19.5
100	pH	2.0	2.0				
	O2 ppm	8.6	8.6				
	Cond.	1205	1205				
	Temp(C)	21.0	20.0	20.0			

TOXICITY TEST REPORT

Sample: 02890269

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : process effluent, (100)
 Laboratory : MOE
 Sampling Method : grab
 Sampled By : J. Lebow
 Date Collected : 11/21/89
 Received : 11/23/89
 Tested : 11/23/89 at: 1410
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	01:00	24:00	48:00	%
100	0	12	12	12	100
60	0	12	12	12	100
30	0	12	12	12	100
15	0	12	12	12	100
5	0	0	6	12	100
Control	0	0	0	0	0

48 Hour LC50 : 0.0 - 5.0 %
 95% fid. limits : 0.0 - 0.0 %
 Comments : MISA Audit/ low pH, rapidly lethal

SLOPE of Mortality Curve :
 LC50 Calculated By : unable to calculate

TOXICITY TEST PARAMETERS

Sample Number: 02890269

TEST CONC. %	ELAPSED TIME			
	00:00	01:00	24:00	48:00
100	pH 1.9 O2 ppm 8.4 Cond. 1078 Temp(C) 20.0	20.0	20.0	20.0
60	pH 2.1 O2 ppm 8.7 Cond. 6890 Temp(C) 20.0	20.0	20.0	20.0
30	pH 2.3 O2 ppm 9.2 Cond. 3810 Temp(C) 20.0	20.0	20.0	20.0
15	pH 2.6 O2 ppm 9.4 Cond. 1960 Temp(C) 20.0	20.0	20.0	20.0
5	pH 5.6 O2 ppm 9.2 Cond. 661 Temp(C) 20.0	20.0	20.0	20.0
Control	pH 8.0 O2 ppm 9.2 Cond. 295 Temp(C) 20.0	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 03890296

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical

Control point : process effluent, (100)

Laboratory : BAR
 Sampling Method : Grab
 Sampled By : L. Lortie
 Date Collected : 11/22/89
 Received : 11/23/89
 Tested : 11/24/89 at: 1310

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E						TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:00	%
Control	0	0	0	0	0	0	0
2	0	0	0	0	0	7	58
3	0	0	0	0	7	12	100
6	0	0	0	0	12	12	100
13	0	0	11	12	12	12	100
25	0	12	12	12	12	12	100
100	0	12	12	12	12	12	100

48 Hour LC50 : 1.4 %

95% fid. limits : 1.0 - 1.8 %

Comments :

SLOPE of Mortality Curve : 5.1
 LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 03890296

TEST CONC. %	E L A P S E D T I M E					
	00:00	01:00	02:00	04:00	24:00	48:00
Control	pH 8.5					8.3
	O2 ppm 9.0					9.9
	Cond. 301					303
	Temp(C) 20.0	20.0	20.0	20.0	20.0	20.0
1	pH 7.1					7.9
	O2 ppm 9.0					9.2
	Cond. 451					453
	Temp(C) 20.0	20.0	20.0	20.0	20.0	20.0
3	pH 6.9					7.7
	O2 ppm 9.2					9.2
	Cond. 600					604
	Temp(C) 20.0	20.0	20.0	20.0	20.0	20.0
6	pH 6.3					7.1
	O2 ppm 8.7					9.5
	Cond. 931					892
	Temp(C) 20.0	20.0	20.0	20.0	20.0	20.0
13	pH 3.1				3.1	
	O2 ppm 9.1				9.1	
	Cond. 1933				1933	
	Temp(C) 20.0	20.0	20.0	20.0	20.0	
25	pH 2.6	2.6				
	O2 ppm 9.0	9.0				
	Cond. 3900	3900				
	Temp(C) 20.0	20.0				
100	pH 2.0	2.0				
	O2 ppm 8.6	8.6				
	Cond. 3560	3560				
	Temp(C) 20.0	20.0				

TOXICITY TEST REPORT

Sample: 03890384

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : process effluent, (100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Pelletier
 Date Collected : 12/19/89
 Received : 12/21/89
 Tested : 12/22/89 at: 1045

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	%
100	0	12	12	12	100
50	0	12	12	12	100
25	0	12	12	12	100
13	0	0	7	12	100
6	0	0	0	12	100
3	0	0	0	12	100
1	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : 1.7 %

95% fid. limits : 1.3 - 2.3 %

Comments :

SLOPE of Mortality Curve : 7.3
 LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 03890384

TEST CONC. %	ELAPSED TIME			
	00:00	04:00	24:00	48:00
100	pH 2.2 O2 ppm 9.3 Cond. 9270 Temp(C) 20.0	2.2 9.3 9270 19.5		
50	pH 2.5 O2 ppm 9.8 Cond. 4640 Temp(C) 20.0	2.5 9.5 4640 19.5		
25	pH 3.1 O2 ppm 9.8 Cond. 2170 Temp(C) 20.0	3.1 9.8 2170 19.5		
13	pH 5.9 O2 ppm 9.4 Cond. 1078 Temp(C) 20.0		6.9 9.0 1106 20.0	
6	pH 6.9 O2 ppm 9.0 Cond. 657 Temp(C) 20.0		7.8 9.0 661 20.0	
3	pH 7.4 O2 ppm 8.8 Cond. 485 Temp(C) 20.0		7.9 9.2 487 20.0	
1	pH 7.8 O2 ppm 8.7 Cond. 365 Temp(C) 20.0		8.2 9.3 372 20.0	
Control	pH 8.3 O2 ppm 8.8 Cond. 302 Temp(C) 20.0		8.3 9.4 305 20.0	

TOXICITY TEST REPORT

Sample: 03900041

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical

Control point : process effluent, (100)

Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Pelletier
 Date Collected : 01/16/90
 Received : 01/18/90
 Tested : 01/18/90 at: 1150

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	%
100	0	12	12	12	100
50	0	12	12	12	100
25	0	12	12	12	100
13	0	2	12	12	100
6	0	0	1	2	16
3	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : 7.6 %

95% fid. limits : 5.8 - 9.8 %

Comments : Lethal

SLOPE of Mortality Curve : 5.5
 LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 03900041

TEST CONC. %	ELAPSED TIME			
	00:00	04:00	24:00	48:00

100	pH	2.1	2.1	
	O2 ppm	9.4	9.4	
	Cond.	7700	7700	
	Temp(C)	19.0	19.0	
50	pH	2.5	2.5	
	O2 ppm	9.4	9.4	
	Cond.	4010	4010	
	Temp(C)	19.0	19.0	
25	pH	3.2	3.2	
	O2 ppm	9.2	9.2	
	Cond.	1887	1887	
	Temp(C)	19.0	19.0	
13	pH	6.1		6.6
	O2 ppm	9.1		9.2
	Cond.	1017		1024
	Temp(C)	19.0	19.0	20.0
6	pH	7.0		7.8
	O2 ppm	9.0		8.7
	Cond.	618		625
	Temp(C)	19.0	19.0	20.0
3	pH	7.4		8.0
	O2 ppm	9.0		8.8
	Cond.	467		471
	Temp(C)	19.0	19.0	20.0
Control	pH	8.5		8.4
	O2 ppm	9.0		9.2
	Cond.	301		308
	Temp(C)	19.0	19.0	20.0

TOXICITY TEST REPORT

Sample: 03900162

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : process effluent, (100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Pelletier
 Date Collected : 02/27/90
 Received : 03/01/90
 Tested : 03/02/90 at: 1045
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	%
100	0	12	12	12	100
50	0	12	12	12	100
25	0	12	12	12	100
13	0	12	12	12	100
6	0	0	12	12	100
3	0	0	2	2	16
2	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : 3.7 %

95% fid. limits : 2.8 - 4.7 %

Comments :

SLOPE of Mortality Curve : 5.8
 LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 03900162

TEST CONC.	ELAPSED TIME			
%	00:00	04:00	24:00	48:00

100	pH	1.8	1.8	
	O2 ppm	8.4	8.4	
	Cond.	2870	2870	
	Temp(C)	20.0	20.0	
50	pH	2.1	2.1	
	O2 ppm	8.6	8.6	
	Cond.	7080	7080	
	Temp(C)	20.0	20.0	
25	pH	2.5	2.5	
	O2 ppm	8.9	8.9	
	Cond.	3590	3590	
	Temp(C)	20.0	20.0	
13	pH	3.1	3.1	
	O2 ppm	8.8	8.8	
	Cond.	1796	1796	
	Temp(C)	20.0	20.0	
6	pH	6.5	7.2	
	O2 ppm	8.5	8.5	
	Cond.	846	833	
	Temp(C)	20.0	20.0	20.5
3	pH	7.2		7.9
	O2 ppm	8.2		9.4
	Cond.	583		583
	Temp(C)	20.0	20.0	20.5
1	pH	7.4		8.1
	O2 ppm	8.2		9.5
	Cond.	452		448
	Temp(C)	20.0	20.0	20.5
Control	pH	8.5		8.6
	O2 ppm	8.1		9.6
	Cond.	303		305
	Temp(C)	20.0	20.0	20.5

TOXICITY TEST REPORT

Sample: 03900228

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical

Control point : process effluent, (100)

Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Pelletier
 Date Collected : 03/20/90
 Received : 03/22/90
 Tested : 03/22/90 at: 1350

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	%
100	0	12	12	12	100
25	0	12	12	12	100
13	0	12	12	12	100
6	0	0	11	12	100
3	0	0	0	11	91
2	0	0	0	5	41
1	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : 1.7 %

95% fid. limits : 1.1 - 2.1 %

Comments :

SLOPE of Mortality Curve : 5.6
 LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 03900228

TEST CONC.	ELAPSED TIME			
%	00:00	04:00	24:00	48:00

100	pH	2.0	2.0		
	O2 ppm	9.3	9.3		
	Cond.	1920	1920		
	Temp(C)	20.0	20.0		
25	pH	2.6	2.6		
	O2 ppm	9.3	9.3		
	Cond.	3370	3370		
	Temp(C)	20.0	20.0		
13	pH	3.2	3.2		
	O2 ppm	9.3	9.3		
	Cond.	1603	1603		
	Temp(C)	20.0	20.0		
6	pH	6.4		7.3	
	O2 ppm	9.2		8.7	
	Cond.	746		741	
	Temp(C)	20.0	20.0	20.0	20.0
3	pH	6.9		7.6	
	O2 ppm	8.9		8.7	
	Cond.	517		519	
	Temp(C)	20.0	20.0	20.0	20.0
1	pH	7.3		8.0	
	O2 ppm	8.8		8.5	
	Cond.	416		408	
	Temp(C)	20.0	20.0	20.0	20.0
0	pH	8.0		8.3	
	O2 ppm	8.8		8.6	
	Cond.	320		324	
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH	8.3		8.3	
	O2 ppm	8.4		8.8	
	Cond.	295		297	
	Temp(C)	20.0	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 03890227

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : pr 200, (200)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : L. Lortie
 Date Collected : 10/18/89
 Received : 10/19/89
 Tested : 10/22/89 at: 1245

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:00	%
Control	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0
6	0	0	0	0	0	2	16
13	0	0	0	4	8	10	83
25	0	12	12	12	12	12	100
50	0	12	12	12	12	12	100
100	0	12	12	12	12	12	100

48 Hour LC50 : 8.8 %

95% fid. limits : 6.7 - 11.4 %

Comments :

SLOPE of Mortality Curve : 6.1
 LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 03890227

TEST CONC. %	ELAPSED TIME					
	00:00	01:00	02:00	04:00	24:00	48:00

Control	pH	8.4				8.2
	O2 ppm	9.5				9.7
	Cond.	294				302
	Temp(C)	19.0	19.0	19.0	19.0	20.0
1	pH	7.9				8.2
	O2 ppm	8.0				8.8
	Cond.	304				303
	Temp(C)	19.0	19.0	19.0	19.0	20.0
3	pH	7.2				7.9
	O2 ppm	9.7				9.6
	Cond.	315				316
	Temp(C)	19.0	19.0	19.0	19.0	20.0
6	pH	6.9				7.5
	O2 ppm	9.2				8.9
	Cond.	327				326
	Temp(C)	19.0	19.0	19.0	19.0	20.0
13	pH	6.3				6.7
	O2 ppm	9.0				9.0
	Cond.	363				356
	Temp(C)	19.0	19.0	19.0	19.0	20.0
25	pH	3.6	3.6			
	O2 ppm	9.4	9.4			
	Cond.	527	527			
	Temp(C)	19.0	19.0			
50	pH	2.6	2.6			
	O2 ppm	9.2	9.2			
	Cond.	1623	1623			
	Temp(C)	19.0	19.0			
100	pH	2.2	2.2			
	O2 ppm	8.6	8.6			
	Cond.	3620	3620			
	Temp(C)	19.0	19.0			

TOXICITY TEST REPORT

Sample: 03890222

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : process effluent, (300)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : L. Lortie
 Date Collected : 10/18/89
 Received : 10/19/89
 Tested : 10/19/89 at: 1340
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY %
	%	00:00	01:00	02:00	04:00	24:00 48:00	
Control	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0
2	0	0	0	0	3	3	25
3	0	0	0	0	11	12	100
6	0	0	0	9	12	12	100
13	0	0	0	5	12	12	100
25	0	0	0	12	12	12	100
50	0	0	0	12	12	12	100
100	0	12	12	12	12	12	100

48 Hour LC50 : 1.7 %

95% fid. limits : 1.3 - 2.2 %

Comments :

SLOPE of Mortality Curve : 4.7
 LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 03890222

TEST ELAPSED TIME
 CONC. % 00:00 01:00 02:00 04:00 24:00 48:00

Control	pH	8.4					8.3
	O2 ppm	9.5					9.5
	Cond.	294					298
	Temp(C)	21.0	20.0	20.0	20.0	20.0	19.5
0	pH	8.6					8.5
	O2 ppm	8.9					8.5
	Cond.	335					314
	Temp(C)	21.0	20.0	20.0	20.0	20.0	19.5
1	pH	8.6					8.4
	O2 ppm	8.2					8.0
	Cond.	383					376
	Temp(C)	21.0	20.0	20.0	20.0	20.0	19.5
3	pH	9.0					8.5
	O2 ppm	7.9					7.9
	Cond.	389					394
	Temp(C)	21.0	20.0	20.0	20.0	20.0	19.5
6	pH	9.2					9.0
	O2 ppm	7.4					8.6
	Cond.	487					501
	Temp(C)	21.0	20.0	20.0	20.0	20.0	
13	pH	9.6					9.5
	O2 ppm	7.1					7.8
	Cond.	716					740
	Temp(C)	21.0	20.0	20.0	20.0	20.0	
25	pH	10.2				10.2	
	O2 ppm	6.5				6.5	
	Cond.	1156				1156	
	Temp(C)	21.0	20.0	20.0	20.0		
50	pH	11.1				11.1	
	O2 ppm	6.3				6.3	
	Cond.	2200				2200	
	Temp(C)	21.0	20.0	20.0	20.0		
100	pH	11.7	11.7				
	O2 ppm	5.0	5.0				
	Cond.	4390	4390				
	Temp(C)	21.0	20.0				

TOXICITY TEST REPORT

Sample: 02890270

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : process effluent, (300)
 Laboratory : MOE
 Sampling Method : grab
 Sampled By : J. Lebow
 Date Collected : 11/21/89
 Received : 11/23/89
 Tested : 11/23/89 at: 1422

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	01:00	24:00	48:00	%
100	0	12	12	12	100
60	0	12	12	12	100
30	0	0	12	12	100
15	0	0	12	12	100
5	0	0	7	8	66
Control	0	0	0	0	0

48 Hour LC50 : 2.0 %

95% fid. limits : 0.5 - 7.8 %

Comments : MISA Audit/high pH, low oxygen, rapidly leth.

SLOPE of Mortality Curve :
 LC50 Calculated By : Spearman-Kärber alpha = 0

TOXICITY TEST PARAMETERS

Sample Number: 02890270

TEST CONC. %	ELAPSED TIME			
	00:00	01:00	24:00	48:00
100	pH 11.6			11.0
	O2 ppm 1.9			3.8
	Cond. 5060			4190
	Temp(C) 20.0	20.0	20.0	20.0
60	pH 11.4			10.6
	O2 ppm 5.1			4.6
	Cond. 3140			2590
	Temp(C) 20.0	20.0	20.0	20.0
30	pH 10.9			10.2
	O2 ppm 6.7			5.4
	Cond. 1640			1410
	Temp(C) 20.0	20.0	20.0	20.0
15	pH 10.2			9.6
	O2 ppm 7.4			6.0
	Cond. 924			818
	Temp(C) 20.0	20.0	20.0	20.0
5	pH 9.3			8.5
	O2 ppm 7.6			5.3
	Cond. 495			462
	Temp(C) 20.0	20.0	20.0	20.0
Control	pH 8.0			8.0
	O2 ppm 8.3			7.8
	Cond. 311			331
	Temp(C) 20.0	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 03890297

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : process effluent, (300)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : L. Lortie
 Date Collected : 11/22/89
 Received : 11/23/89
 Tested : 11/24/89 at: 1050
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:00	%
Control	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0
3	0	0	0	0	5	6	50
6	0	0	0	10	12	12	100
13	0	0	0	12	12	12	100
25	0	0	10	12	12	12	100
100	0	12	12	12	12	12	100

48 Hour LC50 : 3.0 %

95% fid. limits : 2.4 - 3.7 %

Comments :

SLOPE of Mortality Curve : 5.8
 LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 03890297

TEST ELAPSED TIME
 CONC. % 00:00 01:00 02:00 04:00 24:00 48:00

Control	pH	8.5					8.4
	O2 ppm	9.0					10.0
	Cond.	301					306
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
1	pH	8.9					8.6
	O2 ppm	9.2					9.0
	Cond.	341					352
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
3	pH	9.2					8.6
	O2 ppm	8.0					8.7
	Cond.	366					360
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
6	pH	9.4					9.2
	O2 ppm	6.6					8.9
	Cond.	387					380
	Temp(C)	20.0	20.0	20.0	20.0	20.0	20.0
13	pH	10.4				10.4	
	O2 ppm	5.8				5.8	
	Cond.	667				667	
	Temp(C)	20.0	20.0	20.0	20.0	20.0	
25	pH	11.1					
	O2 ppm	5.0					
	Cond.	1264					
	Temp(C)	20.0	20.0				
100	pH	12.1	12.1				
	O2 ppm	2.8	2.8				
	Cond.	5890	5890				
	Temp(C)	20.0	20.0				

TOXICITY TEST REPORT

Sample: 03890385

TEST CONDITIONS

Company : Courtaulds Fibres Canada
Cornwall, ONT
(1900000)
Region : Southeast
Industry : Organic Chemical
Control point : process effluent, (300)
Laboratory : BAR
Sampling Method : Grab
Sampled By : M. Pelletier
Date Collected : 12/19/89
Received : 12/21/89
Tested : 12/22/89 at: 1300
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY	
	%	00:00	04:00	24:00	48:00	%
100	0	12	12	12		100
50	0	12	12	12		100
25	0	0	12	12		100
13	0	0	12	12		100
6	0	0	12	12		100
3	0	0	12	12		100
1	0	0	0	5		41
Control	0	0	0	0		0

48 Hour LC50 : 1.1 %

95% fid. limits : 0.7 - 1.6 %

Comments :

TOXICITY TEST PARAMETERS

Sample Number: 03890385

TEST CONC. %	ELAPSED TIME			
	00:00	04:00	24:00	48:00

100	pH	12.1	12.1	
	O2 ppm	6.7	6.7	
	Cond.	5100	5100	
	Temp(C)	19.5	19.5	
50	pH	11.7	11.7	
	O2 ppm	7.9	7.9	
	Cond.	2340	2340	
	Temp(C)	19.5	19.5	
25	pH	11.1		10.4
	O2 ppm	8.3		8.3
	Cond.	1115		959
	Temp(C)	19.5	19.5	20.0
13	pH	10.2		9.8
	O2 ppm	8.3		8.0
	Cond.	619		578
	Temp(C)	19.5	19.5	20.0
6	pH	9.6		9.1
	O2 ppm	8.3		8.2
	Cond.	424		399
	Temp(C)	19.5	19.5	20.0
3	pH	9.0		8.8
	O2 ppm	8.3		8.6
	Cond.	367		352
	Temp(C)	19.5	19.5	20.0
1	pH	8.9		8.5
	O2 ppm	9.0		8.0
	Cond.	320		333
	Temp(C)	19.5	19.5	20.0
Control	pH	8.3		8.4
	O2 ppm	8.8		9.8
	Cond.	302		304
	Temp(C)	19.5	19.5	20.0

TOXICITY TEST REPORT

Sample: 03900042

TEST CONDITIONS

Company : Courtaulds Fibres Canada
Cornwall, ONT
(1900000)
Region : Southeast
Industry : Organic Chemical
Control point : process effluent, (300)
Laboratory : BAR
Sampling Method : Grab
Sampled By : M. Pelletier
Date Collected : 01/16/90
Received : 01/18/90
Tested : 01/18/90 at: 1210
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	%
100	0	12	12	12	100
50	0	12	12	12	100
25	0	1	12	12	100
13	0	0	12	12	100
6	0	0	12	12	100
3	0	0	12	12	100
1	0	0	4	7	58
Control	0	0	0	0	0

48 Hour LC50 : 0.9 %

95% fid. limits : 0.4 - 1.5 %

Comments : Lethal

TOXICITY TEST PARAMETERS

Sample Number: 03900042

TEST CONC. %	ELAPSED TIME			
	00:00	04:00	24:00	48:00

100	pH	11.9	11.9	
	O2 ppm	7.7	7.7	
	Cond.	3880	3880	
	Temp(C)	19.0	19.0	
50	pH	11.4	11.4	
	O2 ppm	8.4	8.4	
	Cond.	1853	1853	
	Temp(C)	19.0	19.0	
25	pH	10.5		10.0
	O2 ppm	8.4		7.5
	Cond.	933		921
	Temp(C)	19.0	19.0	20.0
13	pH	9.7		9.4
	O2 ppm	8.0		7.8
	Cond.	568		576
	Temp(C)	19.0	19.0	20.0
6	pH	9.3		8.9
	O2 ppm	8.1		8.3
	Cond.	422		426
	Temp(C)	19.0	19.0	20.0
3	pH	9.1		8.8
	O2 ppm	8.4		8.5
	Cond.	368		377
	Temp(C)	19.0	19.0	20.0
1	pH	8.9		8.5
	O2 ppm	8.6		8.4
	Cond.	336		348
	Temp(C)	19.0	19.0	20.0
Control	pH	8.5		8.4
	O2 ppm	9.0		8.7
	Cond.	301		303
	Temp(C)	19.0	19.0	20.0

TOXICITY TEST REPORT

Sample: 03900163

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : process effluent, (300)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Pelletier
 Date Collected : 02/27/90
 Received : 03/01/90
 Tested : 03/02/90 at: 1120
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	%
100	0	12	12	12	100
50	0	12	12	12	100
25	0	0	12	12	100
13	0	0	12	12	100
6	0	0	12	12	100
3	0	0	12	12	100
2	0	0	0	0	0
Control	0	0	0	0	0
48 Hour LC50 : 2.1 %					
95% fid. limits : 1.5 - 3.0 %					
Comments :					

SLOPE of Mortality Curve :
 LC50 Calculated By : Geometric Mean

TOXICITY TEST PARAMETERS

Sample Number: 03900163

TEST CONC. %	ELAPSED TIME			
	00:00	04:00	24:00	48:00
100	pH 11.7	11.7		
	O2 ppm 4.9	4.9		
	Cond. 5750	5750		
	Temp(C) 20.0	20.0		
50	pH 11.3	11.3		
	O2 ppm 6.5	6.5		
	Cond. 2930	2930		
	Temp(C) 20.0	20.0		
25	pH 10.4		10.1	
	O2 ppm 7.1		6.5	
	Cond. 1508		1470	
	Temp(C) 20.0	20.0	20.5	
13	pH 9.8		9.5	
	O2 ppm 7.2		7.4	
	Cond. 895		864	
	Temp(C) 20.0	20.0	20.5	
6	pH 9.4		9.1	
	O2 ppm 7.4		8.0	
	Cond. 577		562	
	Temp(C) 20.0	20.0	20.5	
3	pH 9.0		8.8	
	O2 ppm 7.7		8.3	
	Cond. 439		433	
	Temp(C) 20.0	20.0	20.5	
1	pH 8.7			8.7
	O2 ppm 7.9			9.0
	Cond. 374			379
	Temp(C) 20.0	20.0	20.5	20.5
Control	pH 8.5			8.6
	O2 ppm 8.1			9.5
	Cond. 303			305
	Temp(C) 20.0	20.0	20.5	20.5

TOXICITY TEST REPORT

Sample: 03900229

TEST CONDITIONS

Company : Courtaulds Fibres Canada
Cornwall, ONT
(1900000)
Region : Southeast
Industry : Organic Chemical

Control point : process effluent, (300)

Laboratory : BAR
Sampling Method : Grab
Sampled By : M. Pelletier
Date Collected : 03/20/90
Received : 03/22/90
Tested : 03/22/90 at: 1425

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	02:00	04:00	24:00	48:00	%
100	0	12	12	12	12	100
50	0	0	0	12	12	100
25	0	0	0	12	12	100
13	0	0	0	12	12	100
6	0	0	0	10	12	100
3	0	0	0	5	7	58
2	0	0	0	0	1	8
Control	0	0	0	0	0	0

48 Hour LC50 : 2.6 %

95% fid. limits : 2.0 - 3.4 %

Comments :

TOXICITY TEST PARAMETERS

Sample Number: 03900229

TEST CONC. %	ELAPSED TIME				
	00:00	02:00	04:00	24:00	48:00
100	pH 11.7	11.7			
	O2 ppm 6.0	6.0			
	Cond. 4870	4870			
	Temp(C) 20.0	20.0			
50	pH 11.3			10.6	
	O2 ppm 7.4			6.3	
	Cond. 2420			2130	
	Temp(C) 20.0	20.0	20.0	20.0	
25	pH 10.5			10.0	
	O2 ppm 7.9			6.8	
	Cond. 1203			1125	
	Temp(C) 20.0	20.0	20.0	20.0	
13	pH 9.9			9.4	
	O2 ppm 8.0			7.2	
	Cond. 734			685	
	Temp(C) 20.0	20.0	20.0	20.0	
6	pH 9.4			8.6	
	O2 ppm 8.3			8.5	
	Cond. 496			470	
	Temp(C) 20.0	20.0	20.0	20.0	20.0
3	pH 9.1			8.5	
	O2 ppm 8.4			8.7	
	Cond. 388			387	
	Temp(C) 20.0	20.0	20.0	20.0	20.0
1	pH 8.7			8.4	
	O2 ppm 8.6			8.7	
	Cond. 341			348	
	Temp(C) 20.0	20.0	20.0	20.0	20.0
Control	pH 8.3			8.3	
	O2 ppm 8.4			8.8	
	Cond. 295			297	
	Temp(C) 20.0	20.0	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 03890223

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (500)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : L. Lortie
 Date Collected : 10/18/89
 Received : 10/19/89
 Tested : 10/19/89 at: 1545
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E				TOTAL MORTALITY	
	%	00:00	04:00	24:00	48:00	%
Control	0	0	0	0	0	0
6	0	0	0	0	0	0
13	0	0	0	0	0	0
25	0	0	0	0	0	0
50	0	0	0	0	0	0
100	0	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :TOXICITY TEST PARAMETERS

Sample Number: 03890223

TEST CONC. %	E L A P S E D T I M E			
	00:00	04:00	24:00	48:00

Control	pH	8.4			8.4
	O2 ppm	9.5			9.4
	Cond.	294			297
	Temp(C)	21.0	20.0	20.0	19.5
6	pH	8.3			8.3
	O2 ppm	8.4			8.7
	Cond.	315			301
	Temp(C)	21.0	20.0	20.0	19.5
13	pH	8.3			8.3
	O2 ppm	8.2			8.9
	Cond.	329			320
	Temp(C)	21.0	20.0	20.0	19.5
25	pH	8.2			8.2
	O2 ppm	8.2			9.0
	Cond.	347			341
	Temp(C)	21.0	20.0	20.0	19.5
50	pH	8.2			8.2
	O2 ppm	8.3			8.8
	Cond.	387			380
	Temp(C)	21.0	20.0	20.0	19.5
100	pH	8.0			7.9
	O2 ppm	8.6			8.5
	Cond.	465			452
	Temp(C)	21.0	20.0	20.0	19.5

TOXICITY TEST REPORT

Sample: 02890272

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical

Control point : combined effluent, (500)

Laboratory : MOE
 Sampling Method : grab
 Sampled By : J. Lebow
 Date Collected : 11/21/89
 Received : 11/23/89
 Tested : 11/23/89 at: 1441

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E				TOTAL MORTALITY	
	%	00:00	01:00	24:00	48:00	%
100	0	0	0	0		0
60	0	0	0	1	1	8
30	0	0	0	0		0
15	0	0	0	0		0
5	0	0	0	0		0
Control	0	0	0	0		0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
 LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02890272

TEST CONC.	E L A P S E D T I M E			
	%	00:00	01:00	24:00

100	pH	7.9			7.8
	O2 ppm	8.1			6.5
	Cond.	519			520
	Temp(C)	20.0	20.0	20.0	20.0
60	pH	8.0			7.9
	O2 ppm	8.2			6.7
	Cond.	427			414
	Temp(C)	20.0	20.0	20.0	20.0
30	pH	8.0			7.8
	O2 ppm	8.3			6.4
	Cond.	376			370
	Temp(C)	20.0	20.0	20.0	20.0
15	pH	8.0			7.8
	O2 ppm	8.3			6.5
	Cond.	348			340
	Temp(C)	20.0	20.0	20.0	20.0
5	pH	8.1			7.8
	O2 ppm	8.4			6.5
	Cond.	324			316
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH	8.1			7.8
	O2 ppm	8.4			6.6
	Cond.	305			278
	Temp(C)	20.0	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 03890298

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (500)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : L. Lortie
 Date Collected : 11/22/89
 Received : 11/23/89
 Tested : 11/24/89 at: 1320

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	%
Control	0	0	0	0	0
6	0	0	0	0	0
13	0	0	0	0	0
25	0	0	0	0	0
50	0	0	0	0	0
100	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890298

TEST CONC. %	ELAPSED TIME			
	00:00	04:00	24:00	48:00

Control	pH	8.5			8.4
	O2 ppm	9.0			9.8
	Cond.	301			299
	Temp(C)	20.0	20.0	20.0	20.0
6	pH	8.5			8.4
	O2 ppm	8.2			9.2
	Cond.	332			315
	Temp(C)	20.0	20.0	20.0	20.0
13	pH	8.4			8.4
	O2 ppm	8.2			9.8
	Cond.	357			339
	Temp(C)	20.0	20.0	20.0	20.0
25	pH	8.3			8.2
	O2 ppm	8.1			9.6
	Cond.	370			363
	Temp(C)	20.0	20.0	20.0	20.0
50	pH	8.2			8.0
	O2 ppm	8.0			9.4
	Cond.	426			418
	Temp(C)	20.0	20.0	20.0	20.0
100	pH	7.8			7.8
	O2 ppm	8.0			8.7
	Cond.	548			532
	Temp(C)	20.0	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 03890386

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical

Control point : combined effluent, (500)

Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Pelletier
 Date Collected : 12/19/89
 Received : 12/21/89
 Tested : 12/22/89 at: 1125

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890386

TEST CONC.	ELAPSED TIME		
%	00:00	24:00	48:00

100	pH	7.8	8.1
	O2 ppm	9.3	8.6
	Cond.	448	442
	Temp(C)	19.5	20.0
50	pH	8.1	8.2
	O2 ppm	9.0	8.7
	Cond.	374	374
	Temp(C)	19.5	20.0
25	pH	8.3	8.3
	O2 ppm	8.9	8.8
	Cond.	336	337
	Temp(C)	19.5	20.0
13	pH	8.3	8.3
	O2 ppm	8.8	8.9
	Cond.	317	322
	Temp(C)	19.5	20.0
6	pH	8.3	8.4
	O2 ppm	8.8	8.9
	Cond.	304	309
	Temp(C)	19.5	20.0
Control	pH	8.3	8.2
	O2 ppm	8.8	8.3
	Cond.	302	309
	Temp(C)	19.5	20.0

TOXICITY TEST REPORT

Sample: 03900043

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (500)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Pelletier
 Date Collected : 01/16/90
 Received : 01/18/90
 Tested : 01/18/90 at: 1220

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00	
100	0	2	2	16
50	0	0	1	8
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900043

TEST CONC. %	ELAPSED TIME		
	00:00	24:00	48:00

100	pH	7.4	7.9
	O2 ppm	8.7	8.0
	Cond.	431	441
	Temp(C)	19.0	20.0
50	pH	7.9	8.2
	O2 ppm	8.7	8.2
	Cond.	367	373
	Temp(C)	19.0	20.0
25	pH	8.1	8.3
	O2 ppm	8.7	8.2
	Cond.	334	340
	Temp(C)	19.0	20.0
13	pH	8.2	8.3
	O2 ppm	8.7	8.2
	Cond.	318	322
	Temp(C)	19.0	20.0
6	pH	8.4	8.4
	O2 ppm	8.7	8.2
	Cond.	308	313
	Temp(C)	19.0	20.0
Control	pH	8.5	8.4
	O2 ppm	9.0	8.0
	Cond.	301	305
	Temp(C)	19.0	20.0

TOXICITY TEST REPORT

Sample: 03900164

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (500)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Pelletier
 Date Collected : 02/27/90
 Received : 03/01/90
 Tested : 03/02/90 at: 950
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E			TOTAL MORTALITY	
	%	00:00	24:00	48:00	%
100	0	0	0		0
50	0	0	0		0
25	0	0	0		0
13	0	0	0		0
6	0	0	0		0
Control	0	0	0		0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900164

TEST CONC.	E L A P S E D T I M E		
%	00:00	24:00	48:00

100	pH	7.8	8.2
	O2 ppm	8.0	9.3
	Cond.	404	399
	Temp(C)	20.0	20.5
50	pH	8.3	8.4
	O2 ppm	7.8	9.4
	Cond.	352	348
	Temp(C)	20.0	20.5
25	pH	8.3	8.5
	O2 ppm	7.7	9.3
	Cond.	328	325
	Temp(C)	20.0	20.5
13	pH	8.5	8.5
	O2 ppm	7.6	9.3
	Cond.	316	314
	Temp(C)	20.0	20.5
6	pH	8.5	8.5
	O2 ppm	7.6	9.3
	Cond.	309	311
	Temp(C)	20.0	20.5
Control	pH	8.5	8.5
	O2 ppm	8.1	9.0
	Cond.	303	306
	Temp(C)	20.0	20.5

TOXICITY TEST REPORT

Sample: 03900230

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (500)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Pelletier
 Date Collected : 03/20/90
 Received : 03/22/90
 Tested : 03/22/90 at: 1440
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00 48:00	
100	0	0	0	0
50	0	0	0	0
25	0	1	1	8
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900230

TEST ELAPSED TIME
 CONC. % 00:00 24:00 48:00

100	pH	7.9	7.8
	O2 ppm	9.2	8.2
	Cond.	444	447
	Temp(C)	20.0 20.0	20.0
50	pH	8.0	8.0
	O2 ppm	8.9	8.6
	Cond.	370	372
	Temp(C)	20.0 20.0	20.0
25	pH	8.1	8.1
	O2 ppm	8.7	8.8
	Cond.	333	336
	Temp(C)	20.0 20.0	20.0
13	pH	8.2	8.2
	O2 ppm	8.7	8.8
	Cond.	317	317
	Temp(C)	20.0 20.0	20.0
6	pH	8.1	8.2
	O2 ppm	8.7	8.8
	Cond.	304	305
	Temp(C)	20.0 20.0	20.0
Control	pH	8.3	8.3
	O2 ppm	8.4	8.8
	Cond.	295	297
	Temp(C)	20.0 20.0	20.0

TOXICITY TEST REPORT

Sample: 03890224

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical

Control point : combined effluent, (600)

Laboratory : BAR
 Sampling Method : Grab
 Sampled By : L. Lortie
 Date Collected : 10/18/89
 Received : 10/19/89
 Tested : 10/19/89 at: 1350

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E				TOTAL MORTALITY %
	%	00:00	04:00	24:00	48:00
Control	0	0	0	0	1
6	0	0	0	0	0
13	0	0	0	0	0
25	0	0	1	1	8
50	0	0	0	0	0
100	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890224

TEST CONC. %	E L A P S E D T I M E			
	00:00	04:00	24:00	48:00

Control	pH	8.4			8.4
	O2 ppm	9.5			9.4
	Cond.	294			297
	Temp(C)	21.0	20.0	20.0	19.5
6	pH	7.7			8.3
	O2 ppm	8.0			8.6
	Cond.	342			349
	Temp(C)	21.0	20.0	20.0	19.5
13	pH	8.1			8.3
	O2 ppm	7.9			8.9
	Cond.	416			415
	Temp(C)	21.0	20.0	20.0	19.5
25	pH	7.9			8.2
	O2 ppm	8.0			9.0
	Cond.	522			526
	Temp(C)	21.0	20.0	20.0	19.5
50	pH	7.6			8.0
	O2 ppm	8.2			8.9
	Cond.	744			755
	Temp(C)	21.0	20.0	20.0	19.5
100	pH	7.0			7.4
	O2 ppm	8.6			8.5
	Cond.	1181			1177
	Temp(C)	21.0	20.0	20.0	19.5

TOXICITY TEST REPORT

Sample: 02890268

TEST CONDITIONS

Company : Courtaulds Fibres Canada
Cornwall, ONT
(1900000)

Region : Southeast

Industry : Organic Chemical

Control point : combined effluent, (600)

Laboratory : MOE

Sampling Method : grab

Sampled By : J. Lebow

Date Collected : 11/21/89

Received : 11/23/89

Tested : 11/23/89 at: 1115

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna

Weight(gm) :

Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY	
	%	00:00	01:00	24:00	48:00	%
100	0	0	0	0		0
60	0	0	1	1		8
30	0	0	0	0		0
15	0	0	0	0		0
5	0	0	0	0		0
Control	0	0	0	0		0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit/several floaters in 100% & 60%

TOXICITY TEST PARAMETERS

Sample Number: 02890268

TEST CONC.	%	ELAPSED TIME			
		00:00	01:00	24:00	48:00
100	pH	6.7			7.5
	O2 ppm	9.3			7.2
	Cond.	420			428
	Temp(C)	20.0	20.0	20.0	20.0
60	pH	7.2			7.5
	O2 ppm	9.1			7.0
	Cond.	379			383
	Temp(C)	20.0	20.0	20.0	20.0
30	pH	7.5			7.6
	O2 ppm	9.2			7.2
	Cond.	349			349
	Temp(C)	20.0	20.0	20.0	20.0
15	pH	7.7			7.7
	O2 ppm	9.3			7.5
	Cond.	332			332
	Temp(C)	20.0	20.0	20.0	20.0
5	pH	7.9			7.7
	O2 ppm	9.3			7.4
	Cond.	320			320
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH	7.8			7.9
	O2 ppm	9.3			8.2
	Cond.	300			294
	Temp(C)	20.0	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 03890299

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical

Control point : combined effluent, (600)

Laboratory : BAR
 Sampling Method : Grab
 Sampled By : L. Lortie
 Date Collected : 11/22/89
 Received : 11/23/89
 Tested : 11/24/89 at: 1245

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E				TOTAL MORTALITY	
	%	00:00	04:00	24:00	48:00	%
Control	0	0	0	0	0	0
6	0	0	0	0	0	0
13	0	0	0	0	0	0
25	0	0	0	0	0	0
50	0	0	0	0	0	0
100	0	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890299

TEST CONC.	E L A P S E D T I M E			
%	00:00	04:00	24:00	48:00

Control	pH	8.5			8.4
	O2 ppm	9.0			9.6
	Cond.	301			304
	Temp(C)	20.0	20.0	20.0	20.0
6	pH	8.4			8.4
	O2 ppm	8.4			9.4
	Cond.	397			415
	Temp(C)	20.0	20.0	20.0	20.0
13	pH	8.3			8.4
	O2 ppm	8.4			9.3
	Cond.	508			523
	Temp(C)	20.0	20.0	20.0	20.0
25	pH	8.2			8.3
	O2 ppm	8.4			9.3
	Cond.	692			713
	Temp(C)	20.0	20.0	20.0	20.0
50	pH	7.9			8.2
	O2 ppm	8.6			9.2
	Cond.	1071			1103
	Temp(C)	20.0	20.0	20.0	20.0
100	pH	7.4			8.0
	O2 ppm	8.8			9.2
	Cond.	1813			1887
	Temp(C)	20.0	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 03890387

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (600)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Pelletier
 Date Collected : 12/19/89
 Received : 12/21/89
 Tested : 12/22/89 at: 1210

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00	48:00
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	1	1	8
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890387

TEST CONC.	ELAPSED TIME		
%	00:00	24:00	48:00

100	pH	7.4	8.0
	O2 ppm	9.2	8.8
	Cond.	423	423
	Temp(C)	19.5	20.0
50	pH	7.9	8.2
	O2 ppm	8.9	8.9
	Cond.	366	365
	Temp(C)	19.5	20.0
25	pH	8.2	8.3
	O2 ppm	8.8	9.0
	Cond.	333	333
	Temp(C)	19.5	20.0
13	pH	8.3	8.3
	O2 ppm	8.8	8.9
	Cond.	317	319
	Temp(C)	19.5	20.0
6	pH	8.3	8.4
	O2 ppm	8.7	8.7
	Cond.	304	310
	Temp(C)	19.5	20.0
Control	pH	8.3	8.4
	O2 ppm	8.8	8.3
	Cond.	302	309
	Temp(C)	19.5	20.0

TOXICITY TEST REPORT

Sample: 03900044

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical

Control point : combined effluent, (600)

Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Pelletier
 Date Collected : 01/16/90
 Received : 01/18/90
 Tested : 01/18/90 at: 1230

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E			TOTAL MORTALITY
	%	00:00	24:00	48:00
100	0	1	12	100
50	0	2	3	25
25	0	1	1	8
13	0	1	2	16
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : 60.9 %

95% fid. limits : 35.9 - 103.0 %

Comments : Lethal

SLOPE of Mortality Curve : 2.0
 LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 03900044

TEST CONC.	E L A P S E D T I M E		
%	00:00	24:00	48:00

100	pH	7.2	7.9
	O2 ppm	9.0	8.3
	Cond.	610	615
	Temp(C)	19.0	20.0
50	pH	7.7	8.1
	O2 ppm	9.0	8.3
	Cond.	455	458
	Temp(C)	19.0	20.0
25	pH	8.0	8.3
	O2 ppm	8.9	8.4
	Cond.	376	381
	Temp(C)	19.0	20.0
13	pH	8.2	8.3
	O2 ppm	8.9	8.4
	Cond.	339	347
	Temp(C)	19.0	20.0
6	pH	8.3	8.4
	O2 ppm	8.9	8.4
	Cond.	315	323
	Temp(C)	19.0	20.0
Control	pH	8.5	8.4
	O2 ppm	9.0	8.3
	Cond.	301	307
	Temp(C)	19.0	20.0

TOXICITY TEST REPORT

Sample: 03900165

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (600)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Pelletier
 Date Collected : 02/27/90
 Received : 03/01/90
 Tested : 03/02/90 at: 1100

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00	48:00
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	1	1	8
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50>100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900165

TEST CONC.	ELAPSED TIME		
	%	00:00	24:00

100	pH	7.4		7.9
	O2 ppm	8.2		9.5
	Cond.	1866		1870
	Temp(C)	20.0	20.5	20.5
50	pH	7.9		8.3
	O2 ppm	7.8		9.6
	Cond.	940		942
	Temp(C)	20.0	20.5	20.5
25	pH	8.1		8.4
	O2 ppm	7.8		9.6
	Cond.	708		712
	Temp(C)	20.0	20.5	20.5
13	pH	8.3		8.5
	O2 ppm	7.8		9.6
	Cond.	512		514
	Temp(C)	20.0	20.5	20.5
6	pH	8.4		8.5
	O2 ppm	7.7		9.6
	Cond.	399		394
	Temp(C)	20.0	20.5	20.5
Control	pH	8.5		8.5
	O2 ppm	8.1		9.4
	Cond.	303		297
	Temp(C)	20.0	20.5	20.5

TOXICITY TEST REPORT

Sample: 03900231

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (600)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Pelletier
 Date Collected : 03/20/90
 Received : 03/22/90
 Tested : 03/22/90 at: 1545
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E			TOTAL MORTALITY
	%	00:00	24:00	48:00
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	1	1	8
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900231

TEST CONC.	E L A P S E D T I M E		
%	00:00	24:00	48:00

100	pH	7.1	7.6
	O2 ppm	9.2	8.7
	Cond.	573	577
	Temp(C)	20.0	20.0
50	pH	7.6	7.9
	O2 ppm	8.6	8.8
	Cond.	435	438
	Temp(C)	20.0	20.0
25	pH	7.8	8.0
	O2 ppm	8.4	8.8
	Cond.	369	370
	Temp(C)	20.0	20.0
13	pH	8.0	8.1
	O2 ppm	8.4	8.9
	Cond.	335	337
	Temp(C)	20.0	20.0
6	pH	8.2	8.2
	O2 ppm	8.4	8.8
	Cond.	318	321
	Temp(C)	20.0	20.0
Control	pH	8.3	8.3
	O2 ppm	8.4	8.8
	Cond.	295	297
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 03890225

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (700)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : L. Lortie
 Date Collected : 10/18/89
 Received : 10/19/89
 Tested : 10/19/89 at: 1400

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E				TOTAL MORTALITY %
	%	00:00	04:00	24:00	48:00
Control	0	0	1	1	8
6	0	0	0	0	0
13	0	0	0	0	0
25	0	0	0	0	0
50	0	0	0	0	0
100	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :TOXICITY TEST PARAMETERS

Sample Number: 03890225

TEST CONC. %	E L A P S E D T I M E			
	00:00	04:00	24:00	48:00

Control	pH	8.4			8.3
	O2 ppm	9.5			9.3
	Cond.	294			297
	Temp(C)	21.0	20.0	20.0	19.5
6	pH	7.5			8.3
	O2 ppm	8.2			8.6
	Cond.	313			314
	Temp(C)	21.0	20.0	20.0	19.5
13	pH	8.2			8.3
	O2 ppm	7.9			8.9
	Cond.	334			329
	Temp(C)	21.0	20.0	20.0	19.5
25	pH	8.0			8.1
	O2 ppm	8.0			9.0
	Cond.	361			356
	Temp(C)	21.0	20.0	20.0	19.5
50	pH	7.6			7.9
	O2 ppm	8.1			8.9
	Cond.	419			413
	Temp(C)	21.0	20.0	20.0	19.5
100	pH	7.9			7.4
	O2 ppm	8.4			8.6
	Cond.	530			527
	Temp(C)	21.0	20.0	20.0	19.5

TOXICITY TEST REPORT

Sample: 02890273

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (700)
 Laboratory : MOE
 Sampling Method : grab
 Sampled By : J. Lebow
 Date Collected : 11/21/89
 Received : 11/23/89
 Tested : 11/23/89 at: 1511
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	01:00	24:00	48:00	%
100	0	0	1	10	83
60	0	0	0	2	16
30	0	0	1	0	0
15	0	0	2	2	16
5	0	0	1	3	25
Control	0	0	0	0	0

48 Hour LC50 : 64.5 %
 95% fid. limits : 51.9 - 80.1 %
 Comments : MISA Audit/

SLOPE of Mortality Curve :
 LC50 Calculated By : Spearman-Kärber alpha =14

TOXICITY TEST PARAMETERS

Sample Number: 02890273

TEST CONC. %	ELAPSED TIME			
	00:00	01:00	24:00	48:00
100	pH 6.0			6.7
	O2 ppm 8.1			6.2
	Cond. 605			587
	Temp(C) 20.0	20.0	20.0	20.0
60	pH 6.9			7.2
	O2 ppm 8.2			5.9
	Cond. 481			481
	Temp(C) 20.0	20.0	20.0	20.0
30	pH 7.3			7.5
	O2 ppm 8.3			6.1
	Cond. 402			392
	Temp(C) 20.0	20.0	20.0	20.0
15	pH 7.7			7.6
	O2 ppm 8.3			6.5
	Cond. 358			349
	Temp(C) 20.0	20.0	20.0	20.0
5	pH 7.9			7.7
	O2 ppm 8.3			6.6
	Cond. 329			329
	Temp(C) 20.0	20.0	20.0	20.0
Control	pH 8.0			7.9
	O2 ppm 8.3			7.0
	Cond. 306			285
	Temp(C) 20.0	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 03890300

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (700)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : L. Lortie
 Date Collected : 11/22/89
 Received : 11/23/89
 Tested : 11/25/89 at: 945

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	%
Control	0	0	0	0	0
6	0	0	0	0	0
13	0	0	0	0	0
25	0	0	0	0	0
50	0	0	0	0	0
100	0	0	0	0	0

48 Hour LC50 : Non-lethal
 95% fid. limits : 0.0 - 0.0 %
 Comments : Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890300

TEST CONC. %	ELAPSED TIME			
	00:00	04:00	24:00	48:00

Control	pH	7.9			8.3
	O2 ppm	9.0			8.9
	Cond.	301			302
	Temp(C)	20.0	20.0	20.0	20.0
6	pH	7.9			8.3
	O2 ppm	8.9			9.2
	Cond.	324			329
	Temp(C)	20.0	20.0	20.0	20.0
13	pH	7.9			8.3
	O2 ppm	9.0			9.2
	Cond.	347			350
	Temp(C)	20.0	20.0	20.0	20.0
25	pH	7.7			8.2
	O2 ppm	8.9			9.2
	Cond.	386			387
	Temp(C)	20.0	20.0	20.0	20.0
50	pH	7.4			8.0
	O2 ppm	9.0			9.1
	Cond.	469			468
	Temp(C)	20.0	20.0	20.0	20.0
100	pH	6.6			7.5
	O2 ppm	9.4			9.0
	Cond.	642			637
	Temp(C)	20.0	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 03900045

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical

Control point : combined effluent, (700)

Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Pelletier
 Date Collected : 01/16/90
 Received : 01/18/90
 Tested : 01/18/90 at: 1305

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	7	7	58
50	0	0	1	8
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : 93.3 %

95% fid. limits : 66.2 - 131.3 %

Comments : lethal

SLOPE of Mortality Curve : 3.6
 LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 03900045

TEST CONC.	ELAPSED TIME		
%	00:00	24:00	48:00

100	pH	7.4	7.8
	O2 ppm	9.0	8.1
	Cond.	389	399
	Temp(C)	19.0	20.5
50	pH	7.9	8.1
	O2 ppm	9.0	8.3
	Cond.	342	354
	Temp(C)	19.0	20.5
25	pH	8.2	8.3
	O2 ppm	9.0	8.4
	Cond.	319	328
	Temp(C)	19.0	20.5
13	pH	8.3	8.3
	O2 ppm	9.0	8.5
	Cond.	308	317
	Temp(C)	19.0	20.5
6	pH	8.4	8.4
	O2 ppm	9.0	8.5
	Cond.	302	311
	Temp(C)	19.0	20.5
Control	pH	8.5	8.3
	O2 ppm	9.0	8.3
	Cond.	301	303
	Temp(C)	19.0	20.5

TOXICITY TEST REPORT

Sample: 03900166

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (700)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Pelletier
 Date Collected : 02/27/90
 Received : 03/01/90
 Tested : 03/02/90 at: 1005

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00	48:00
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	1	1	8

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900166

TEST CONC.	ELAPSED TIME		
%	00:00	24:00	48:00

100	pH	6.9	7.7
	O2 ppm	8.1	9.7
	Cond.	628	627
	Temp(C)	20.0	20.5
50	pH	7.5	8.2
	O2 ppm	8.0	9.8
	Cond.	463	465
	Temp(C)	20.0	20.5
25	pH	7.9	8.3
	O2 ppm	7.9	9.9
	Cond.	383	384
	Temp(C)	20.0	20.5
13	pH	8.2	8.4
	O2 ppm	7.8	10.0
	Cond.	345	349
	Temp(C)	20.0	20.5
6	pH	8.2	8.5
	O2 ppm	7.8	10.0
	Cond.	323	325
	Temp(C)	20.0	20.5
Control	pH	8.5	8.5
	O2 ppm	8.1	9.9
	Cond.	303	310
	Temp(C)	20.0	20.5

TOXICITY TEST REPORT

Sample: 03900232

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (700)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Pelletier
 Date Collected : 03/20/90
 Received : 03/22/90
 Tested : 03/22/90 at: 1550
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E			TOTAL MORTALITY	
	%	00:00	24:00	48:00	%
100	0	0	0		0
50	0	1	1		8
25	0	0	0		0
13	0	0	0		0
6	0	1	1		8
Control	0	0	0		0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900232

TEST CONC.	E L A P S E D T I M E		
%	00:00	24:00	48:00

100	pH	7.2	7.8
	O2 ppm	9.1	8.6
	Cond.	444	450
	Temp(C)	20.0	20.0
50	pH	7.7	8.0
	O2 ppm	8.9	8.8
	Cond.	371	371
	Temp(C)	20.0	20.0
25	pH	7.9	8.1
	O2 ppm	8.8	8.8
	Cond.	336	338
	Temp(C)	20.0	20.0
13	pH	8.0	8.1
	O2 ppm	8.7	8.8
	Cond.	317	320
	Temp(C)	20.0	20.0
6	pH	8.1	8.2
	O2 ppm	8.6	8.9
	Cond.	305	318
	Temp(C)	20.0	20.0
Control	pH	8.3	8.3
	O2 ppm	8.4	8.9
	Cond.	295	297
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 03890226

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (800)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : L. Lortie
 Date Collected : 10/18/89
 Received : 10/19/89
 Tested : 10/19/89 at: 1415

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E				TOTAL MORTALITY	
	%	00:00	04:00	24:00	48:00	%
Control	0	0	0	0		0
6	0	0	0	0		0
13	0	0	0	0		0
25	0	0	0	0		0
50	0	0	1	1		8
100	0	0	0	0		0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890226

TEST ELAPSED TIME
 CONC. % 00:00 04:00 24:00 48:00

Control	pH	8.4			8.4
	O2 ppm	9.5			9.3
	Cond.	294			298
	Temp(C)	21.0	20.0	20.0	19.5
6	pH	8.2			8.3
	O2 ppm	8.2			8.8
	Cond.	300			307
	Temp(C)	21.0	20.0	20.0	19.5
13	pH	8.1			8.2
	O2 ppm	8.1			8.8
	Cond.	324			327
	Temp(C)	21.0	20.0	20.0	19.5
25	pH	7.9			8.2
	O2 ppm	8.2			8.9
	Cond.	352			355
	Temp(C)	21.0	20.0	20.0	19.5
50	pH	7.5			8.0
	O2 ppm	8.3			8.8
	Cond.	408			412
	Temp(C)	21.0	20.0	20.0	19.5
100	pH	7.1			7.6
	O2 ppm	8.7			8.5
	Cond.	519			524
	Temp(C)	21.0	20.0	20.0	19.5

TOXICITY TEST REPORT

Sample: 02890271

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (800)
 Laboratory : MOE
 Sampling Method : grab
 Sampled By : J. Lebow
 Date Collected : 11/21/89
 Received : 11/23/89
 Tested : 11/23/89 at: 1432
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	01:00	24:00	48:00	%
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
15	0	0	0	0	0
5	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
 LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02890271

TEST CONC. %	ELAPSED TIME			
	00:00	01:00	24:00	48:00
100	pH 7.0			7.5
	O2 ppm 8.0			6.5
	Cond. 431			428
	Temp(C) 20.0	20.0	20.0	20.0
60	pH 7.4			7.6
	O2 ppm 8.1			6.6
	Cond. 381			381
	Temp(C) 20.0	20.0	20.0	20.0
30	pH 7.7			7.8
	O2 ppm 8.2			7.0
	Cond. 350			347
	Temp(C) 20.0	20.0	20.0	20.0
15	pH 7.9			7.8
	O2 ppm 8.2			6.9
	Cond. 332			330
	Temp(C) 20.0	20.0	20.0	20.0
5	pH 8.0			7.8
	O2 ppm 8.2			6.9
	Cond. 320			315
	Temp(C) 20.0	20.0	20.0	20.0
Control	pH 8.1			8.0
	O2 ppm 8.3			7.6
	Cond. 303			297
	Temp(C) 20.0	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 03890301

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (800)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : L. Lortie
 Date Collected : 11/22/89
 Received : 11/23/89
 Tested : 11/24/89 at: 1150

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	%
Control	0	0	0	0	0
6	0	0	0	0	0
13	0	0	0	0	0
25	0	0	0	1	8
50	0	0	0	0	0
100	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50>100

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890301

TEST CONC.	ELAPSED TIME			
%	00:00	04:00	24:00	48:00

Control	pH	8.5			8.4
	O2 ppm	9.0			9.5
	Cond.	301			304
	Temp(C)	20.0	20.0	20.0	20.0
6	pH	8.4			8.4
	O2 ppm	8.3			9.4
	Cond.	323			331
	Temp(C)	20.0	20.0	20.0	20.0
13	pH	8.2			8.3
	O2 ppm	8.4			9.3
	Cond.	352			352
	Temp(C)	20.0	20.0	20.0	20.0
25	pH	7.8			8.1
	O2 ppm	8.4			9.3
	Cond.	387			392
	Temp(C)	20.0	20.0	20.0	20.0
50	pH	7.4			7.9
	O2 ppm	8.5			9.2
	Cond.	466			475
	Temp(C)	20.0	20.0	20.0	20.0
100	pH	6.6			7.3
	O2 ppm	9.0			9.1
	Cond.	643			648
	Temp(C)	20.0	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 03890389

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (800)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Pelletier
 Date Collected : 12/19/89
 Received : 12/21/89
 Tested : 12/22/89 at: 1235

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00	
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal
 95% fid. limits : 0.0 - 0.0 %
 Comments : Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890389

TEST CONC. %	ELAPSED TIME		
	00:00	24:00	48:00

100	pH	7.4	8.0
	O2 ppm	9.1	8.8
	Cond.	419	426
	Temp(C)	19.5	20.0
50	pH	7.9	8.2
	O2 ppm	8.8	8.8
	Cond.	361	365
	Temp(C)	19.5	20.0
25	pH	8.2	8.3
	O2 ppm	8.7	8.9
	Cond.	331	334
	Temp(C)	19.5	20.0
13	pH	8.3	8.3
	O2 ppm	8.7	8.9
	Cond.	315	319
	Temp(C)	19.5	20.0
6	pH	8.3	8.3
	O2 ppm	8.7	8.9
	Cond.	303	304
	Temp(C)	19.5	20.0
Control	pH	8.3	8.2
	O2 ppm	8.8	8.6
	Cond.	302	264
	Temp(C)	19.5	20.0

TOXICITY TEST REPORT

Sample: 03900046

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (800)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Pelletier
 Date Collected : 01/16/90
 Received : 01/18/90
 Tested : 01/18/90 at: 1315

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00	48:00
100	0	1	1	8
50	0	0	1	8
25	0	0	1	8
13	0	0	0	0
6	0	0	1	8
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 > 100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900046

TEST CONC.	ELAPSED TIME		
%	00:00	24:00	48:00

100	pH	6.9	7.7
	O2 ppm	9.0	8.3
	Cond.	517	528
	Temp(C)	19.0	20.5
50	pH	7.4	8.1
	O2 ppm	9.0	8.4
	Cond.	408	415
	Temp(C)	19.0	20.5
25	pH	7.9	8.2
	O2 ppm	9.0	8.5
	Cond.	353	359
	Temp(C)	19.0	20.5
13	pH	8.1	8.3
	O2 ppm	9.0	8.5
	Cond.	326	331
	Temp(C)	19.0	20.5
6	pH	8.3	8.3
	O2 ppm	9.0	8.5
	Cond.	311	317
	Temp(C)	19.0	20.5
Control	pH	8.5	8.4
	O2 ppm	9.0	8.2
	Cond.	301	305
	Temp(C)	19.0	20.5

TOXICITY TEST REPORT

Sample: 03900167

TEST CONDITIONS

Company : Courtaulds Fibres Canada
Cornwall, ONT
(1900000)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (800)
Laboratory : BAR
Sampling Method : Grab
Sampled By : M. Pelletier
Date Collected : 02/27/90
Received : 03/01/90
Tested : 03/02/90 at: 1020
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E			TOTAL MORTALITY
	%	00:00	24:00	48:00
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	1	8
Control	0	0	1	8

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

TOXICITY TEST PARAMETERS

Sample Number: 03900167

TEST CONC.	E L A P S E D T I M E		
%	00:00	24:00	48:00

100	pH	6.9	7.7
	O2 ppm	8.2	9.8
	Cond.	596	597
	Temp(C)	20.0	20.5
50	pH	7.5	8.2
	O2 ppm	8.0	9.9
	Cond.	449	447
	Temp(C)	20.0	20.5
25	pH	7.9	8.4
	O2 ppm	7.9	10.0
	Cond.	376	376
	Temp(C)	20.0	20.5
13	pH	8.2	8.4
	O2 ppm	7.9	10.0
	Cond.	341	344
	Temp(C)	20.0	20.5
6	pH	8.2	8.5
	O2 ppm	7.8	10.0
	Cond.	320	327
	Temp(C)	20.0	20.5
Control	pH	8.5	8.5
	O2 ppm	8.1	9.9
	Cond.	303	305
	Temp(C)	20.0	20.5

TOXICITY TEST REPORT

Sample: 03900233

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (800)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Pelletier
 Date Collected : 03/20/90
 Received : 03/22/90
 Tested : 03/22/90 at: 1610
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00 48:00	
100	0	0	0	0
50	0	1	1	8
25	0	1	2	16
13	0	0	0	0
6	0	0	0	0
Control	0	1	1	8

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900233

TEST CONC.	ELAPSED TIME		
%	00:00	24:00	48:00

100	pH	7.3	7.8
	O2 ppm	9.3	8.7
	Cond.	423	432
	Temp(C)	20.0	20.0
50	pH	7.7	8.0
	O2 ppm	8.9	8.8
	Cond.	360	365
	Temp(C)	20.0	20.0
25	pH	8.0	8.1
	O2 ppm	8.8	8.8
	Cond.	330	334
	Temp(C)	20.0	20.0
13	pH	8.1	8.2
	O2 ppm	8.6	8.9
	Cond.	314	319
	Temp(C)	20.0	20.0
6	pH	8.1	8.2
	O2 ppm	8.3	8.8
	Cond.	301	309
	Temp(C)	20.0	20.0
Control	pH	8.3	8.3
	O2 ppm	8.4	8.9
	Cond.	295	297
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 03890302

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : intake water, (1300)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : L. Lortie
 Date Collected : 11/22/89
 Received : 11/23/89
 Tested : 11/24/89 at: 1200
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E				TOTAL MORTALITY %
	%	00:00	04:00	24:00	48:00
Control	0	0	0	0	0
6	0	0	0	0	0
13	0	0	0	0	0
25	0	0	0	0	0
50	0	0	0	0	0
100	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890302

TEST CONC. %	E L A P S E D T I M E			
	00:00	04:00	24:00	48:00

Control	pH	8.5			8.4
	O2 ppm	9.0			9.4
	Cond.	301			304
	Temp(C)	20.0	20.0	20.0	20.0
6	pH	8.4			8.4
	O2 ppm	8.2			9.4
	Cond.	308			313
	Temp(C)	20.0	20.0	20.0	20.0
13	pH	8.4			8.4
	O2 ppm	8.3			9.4
	Cond.	318			315
	Temp(C)	20.0	20.0	20.0	20.0
25	pH	8.4			8.3
	O2 ppm	8.3			9.5
	Cond.	326			322
	Temp(C)	20.0	20.0	20.0	20.0
50	pH	8.3			8.3
	O2 ppm	8.4			9.4
	Cond.	341			336
	Temp(C)	20.0	20.0	20.0	20.0
100	pH	8.1			8.2
	O2 ppm	8.7			9.2
	Cond.	371			365
	Temp(C)	20.0	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 03890390

TEST CONDITIONS

Company : Courtaulds Fibres Canada
 Cornwall, ONT
 (1900000)
 Region : Southeast
 Industry : Organic Chemical
 Control point : intake water, (1300)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Pelletier
 Date Collected : 12/19/89
 Received : 12/21/89
 Tested : 12/22/89 at: 1110
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00 48:00	
100	0	1	1	8
50	0	0	0	0
25	0	1	1	8
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890390

TEST CONC.	ELAPSED TIME		
%	00:00	24:00	48:00

100	pH	8.1	8.2
	O2 ppm	9.6	8.8
	Cond.	348	353
	Temp(C)	19.5	20.0 20.0
50	pH	8.2	8.3
	O2 ppm	9.1	8.8
	Cond.	326	329
	Temp(C)	19.5	20.0 20.0
25	pH	8.3	8.3
	O2 ppm	8.9	8.7
	Cond.	313	317
	Temp(C)	19.5	20.0 20.0
13	pH	8.3	8.3
	O2 ppm	8.8	8.7
	Cond.	307	313
	Temp(C)	19.5	20.0 20.0
6	pH	8.3	8.3
	O2 ppm	8.8	8.7
	Cond.	301	311
	Temp(C)	19.5	20.0 20.0
Control	pH	8.3	8.2
	O2 ppm	8.8	8.5
	Cond.	302	305
	Temp(C)	19.5	20.0 20.0

COMPANY: Dow Chemical Canada Inc., Sarnia
(910109)
SECTOR: Organic Chemical
REGION: Southwest

SUMMARY

The data for forty-three trout bioassays, conducted on process effluent, combined effluent and once through cooling water effluent samples collected between October 1989 and March 1990, were provided by Dow Chemical Canada Incorporated. All six samples collected from combined effluent control point 0200 were determined to have been non-acutely lethal to test fish. One audit sample collected in March and tested by the O.M.E. laboratory was also non-acutely lethal. All six samples from combined effluent control point 0500 were also non-acutely lethal. An audit sample collected in March was also non-acutely lethal. All six samples from combined effluent control point 0600 were non-acutely lethal. The audit sample collected in March was similiarily determined as non-acutely lethal. All six samples collected from combined effluent 0700 were determined to have been non-acutely lethal. The audit sample collected in March was also non-acutely lethal. Five of six samples from the combined effluent control point 0900 were determined to have been non-acutely lethal while the remaining had a 96 hour LC50 > 100 %. The audit sample collected in March was non-acutely lethal. All twelve once through cooling water samples from control point 0300 and 1000 were non-acutely lethal. The two audit samples for the two OTCW discharges were also non-acutely lethal. Four of five process effluent samples collected from control point 2100 were determined to have been non-lethal. The remaining sample and the audit sample collected in March had a 96 hour LC50s > 100 %.

intake water

combined effluent

03890206 sampled: 10/10/89 non-lethal
95% fid. limits: 100.0 - 100.0 %
comments:

03890256 sampled: 11/13/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03890359 sampled: 12/13/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

Dow Chemical Canada Inc. (continued)

03900018 sampled: 01/09/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900111 sampled: 02/13/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test

01900028 sampled: 03/04/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

03900209 sampled: 03/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; Non-lethal

OT cooling water

03890203 sampled: 10/10/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

03890261 sampled: 11/13/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Don Lethal

03900016 sampled: 01/09/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

01900027 sampled: 03/04/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

03900210 sampled: 03/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; Non-lethal

combined effluent

03890207 sampled: 10/10/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

03890257 sampled: 11/13/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03890360 sampled: 12/13/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

Dow Chemical Canada Inc. (continued)

03900015 sampled: 01/09/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900112 sampled: 02/13/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test

01900029 sampled: 03/04/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

03900211 sampled: 03/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; Non-lethal

combined effluent

03890209 sampled: 10/10/89 non-lethal
95% fid. limits: 100.0 - 100.0 %
comments:

03890258 sampled: 11/13/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03890356 sampled: 12/13/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900013 sampled: 01/09/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900113 sampled: 02/13/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single concentration test - Non lethal

01900031 sampled: 03/05/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

03900212 sampled: 03/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; Non-lethal

Dow Chemical Canada Inc. (continued)

combined effluent

03890205 sampled: 10/10/89 non-lethal
95% fid. limits: 100.0 - 100.0 %
comments:

03890259 sampled: 11/13/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03890358 sampled: 12/13/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900014 sampled: 01/09/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900114 sampled: 02/13/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test

01900030 sampled: 03/05/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

03900213 sampled: 03/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; Non-lethal

combined effluent

03890202 sampled: 10/10/89 non-lethal
95% fid. limits: 100.0 - 100.0 %
comments: Non lethal

03890260 sampled: 11/13/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03890361 sampled: 12/13/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900012 sampled: 01/09/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900115 sampled: 02/13/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration test

Dow Chemical Canada Inc. (continued)

01900032 sampled: 03/05/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

03900214 sampled: 03/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; Non-lethal

OT cooling water

03890204 sampled: 10/10/89 non-lethal
95% fid. limits: 100.0 - 100.0 %
comments:

03890262 sampled: 11/13/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900017 sampled: 01/09/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

01900035 sampled: 03/12/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

03900215 sampled: 03/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; non-lethal

intake water

process effluent

process effluent

process effluent

process effluent

process effluent

process effluent

process effluent

Dow Chemical Canada Inc. (continued)

process effluent

process effluent

03890274	sampled: 11/16/89	non-lethal
95% fid. limits:	0.0 -	0.0 %
comments:	Non lethal	
03890357	sampled: 12/13/89	LC50: >100 %
95% fid. limits:	0.0 -	0.0 %
comments:	LC50 >100%	
03900011	sampled: 01/09/90	non-lethal
95% fid. limits:	0.0 -	0.0 %
comments:	Non-lethal	
03900116	sampled: 02/13/90	non-lethal
95% fid. limits:	0.0 -	0.0 %
comments:	Non lethal	
01900034	sampled: 03/14/90	LC50: >100 %
95% fid. limits:	0.0 -	0.0 %
comments:	MISA Audit	
03900216	sampled: 03/19/90	non-lethal
95% fid. limits:	0.0 -	0.0 %
comments:	Non-lethal	

waste site

total plant

steam plant

north pump house

south pump house

rain gauge

TOXICITY TEST REPORT

Sample: 03890206

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (200)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Rankin
 Date Collected : 10/10/89
 Received : 10/11/89
 Tested : 10/12/89 at: 1400
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 100.0 - 100.0 %

Comments :

SLOPE of Mortality Curve :
 LC50 Calculated By : INTUITIVE

TOXICITY TEST PARAMETERS

Sample Number: 03890206

TEST CONC. %	ELAPSED TIME					
	00:00	04:00	24:00	48:00	72:00	96:00

Control	pH	7.7					8.4
	O2 ppm	7.9					9.1
	Cond.	558					564
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0
10	pH	7.7					8.4
	O2 ppm	7.9					9.2
	Cond.	529					533
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0
20	pH	7.8					8.3
	O2 ppm	7.9					9.2
	Cond.	498					502
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0
40	pH	7.8					8.3
	O2 ppm	8.3					9.1
	Cond.	435					444
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0
65	pH	7.8					8.1
	O2 ppm	8.4					8.8
	Cond.	359					364
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0
100	pH	8.2					7.8
	O2 ppm	8.5					8.7
	Cond.	241					249
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 03890256

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (200)
Laboratory : BAR
Sampling Method : Grab
Sampled By : M. Rankin
Date Collected : 11/13/89
Received : 11/14/89
Tested : 11/15/89 at: 1030
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03890256

TEST CONC. %	ELAPSED TIME					
	00:00	04:00	24:00	48:00	72:00	96:00

Control	pH	7.7				8.6
	O2 ppm	7.5				9.7
	Cond.	561				560
	Temp(C)	15.0	15.0	15.0	14.0	14.0
10	pH	7.7				8.5
	O2 ppm	7.9				9.7
	Cond.	534				534
	Temp(C)	15.0	15.0	15.0	14.0	14.0
20	pH	7.7				8.5
	O2 ppm	8.0				9.8
	Cond.	504				502
	Temp(C)	15.0	15.0	15.0	14.0	14.0
40	pH	7.8				8.3
	O2 ppm	8.4				9.4
	Cond.	436				440
	Temp(C)	15.0	15.0	15.0	14.0	14.0
65	pH	7.9				8.4
	O2 ppm	9.2				9.7
	Cond.	352				354
	Temp(C)	15.0	15.0	15.0	14.0	14.0
100	pH	8.1				8.2
	O2 ppm	9.7				9.8
	Cond.	236				245
	Temp(C)	15.0	15.0	15.0	14.0	14.0

TOXICITY TEST REPORT

Sample: 03890359

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (200)
Laboratory : BAR
Sampling Method : Effluent
Sampled By : D. McLaughlin
Date Collected : 12/13/89
Received : 12/14/89
Tested : 12/17/89 at: 800
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

TOXICITY TEST PARAMETERS

Sample Number: 03890359

TEST CONC. %	ELAPSED TIME				
	00:00	24:00	48:00	72:00	96:00
100	pH 8.2				8.2
	O2 ppm 9.8				9.9
	Cond. 245				254
	Temp(C) 15.0	14.0	14.0	15.0	14.0
65	pH 8.0				8.3
	O2 ppm 9.2				10.0
	Cond. 359				371
	Temp(C) 15.0	14.0	14.0	15.0	14.0
40	pH 8.0				8.3
	O2 ppm 9.0				10.0
	Cond. 438				448
	Temp(C) 15.0	14.0	14.0	15.0	14.0
20	pH 8.0				8.5
	O2 ppm 8.6				10.2
	Cond. 501				510
	Temp(C) 15.0	14.0	14.0	15.0	14.0
10	pH 8.0				8.4
	O2 ppm 8.6				9.7
	Cond. 531				536
	Temp(C) 15.0	14.0	14.0	15.0	14.0
5	pH 8.0				8.5
	O2 ppm 8.5				10.0
	Cond. 546				550
	Temp(C) 15.0	14.0	14.0	15.0	14.0
Control	pH 7.8				8.5
	O2 ppm 8.7				10.0
	Cond. 554				552
	Temp(C) 15.0	14.0	14.0	15.0	14.0

TOXICITY TEST REPORT

Sample: 03900018

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (200)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. McLaughlin
Date Collected : 01/09/90
Received : 01/10/90
Tested : 01/11/90 at: 1100
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments : Non-lethal

TOXICITY TEST PARAMETERS

Sample Number: 03900018

TEST CONC.	E L A P S E D T I M E				
%	00:00	24:00	48:00	72:00	96:00
100	pH	8.1			8.1
	O2 ppm	10.4			9.7
	Cond.	258			243
	Temp(C)	15.0	14.5	15.0	15.0
Control	pH	7.9			8.5
	O2 ppm	9.1			9.6
	Cond.	563			560
	Temp(C)	15.0	14.5	15.0	15.0

MISA Trout

SLOPE of Mortality Curve :
LC50 Calculated By : Intuitive

TOXICITY TEST REPORT

Sample: 03900111

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (200)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. McLaughlin
Date Collected : 02/13/90
Received : 02/14/90
Tested : 02/14/90 at: 1530
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test

TOXICITY TEST PARAMETERS

Sample Number: 03900111

TEST CONC. %	ELAPSED TIME				
	00:00	24:00	48:00	72:00	96:00
100	pH	8.1			8.1
	O2 ppm	10.1			8.9
	Cond.	230			238
	Temp(C)	15.0	15.0	14.0	14.0
100	pH	8.1			8.0
	O2 ppm	10.1			9.3
	Cond.	230			241
	Temp(C)	15.0	15.0	14.0	14.0
Control	pH	7.9			8.4
	O2 ppm	9.2			9.2
	Cond.	533			531
	Temp(C)	15.0	15.0	14.0	14.0
Control	pH	7.9			8.4
	O2 ppm	9.2			9.2
	Cond.	533			530
	Temp(C)	15.0	15.0	14.0	14.0

TOXICITY TEST REPORT

Sample: 01900028

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (200)
Laboratory : MOE
Sampling Method : Grab
Sampled By : D. Hamilton
Date Collected : 03/04/90
Received : 03/06/90
Tested : 03/08/90 at: 1400
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME										TOTAL MORTALITY
%	00:00	00:30	01:00	02:00	04:00	20:00	50:00	74:00	96:00	%	
100	0	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01900028

TEST CONC. %	ELAPSED TIME									
	00:00	00:30	01:00	02:00	04:00	20:00	50:00	74:00	96:00	
100	pH	6.4	7.6			7.5	7.4	7.3	7.	
	O2 ppm	9.7	9.6			9.6	9.5	8.7	9.	
	Cond.	200	175			175	175	180	18	
	Temp(C)	15.0	15.0			15.0	15.0	15.0	15.	
65	pH		7.5			7.5	7.4	7.6	7.	
	O2 ppm		9.6			9.5	9.6	9.7	9.	
	Cond.		205			200	205	205	21	
	Temp(C)		15.0			15.0	15.0	15.0	15.	
40	pH		7.5			7.4	7.4	7.6	7.	
	O2 ppm		9.7			9.5	9.7	9.8	9.	
	Cond.		225			225	230	230	23	
	Temp(C)		15.0			15.0	15.0	15.0	15.	
30	pH		7.5			7.3	7.3	7.5	7.	
	O2 ppm		9.6			9.1	9.6	9.7	9.	
	Cond.		235			235	235	240	24	
	Temp(C)		15.0			15.0	15.0	15.0	15.	
20	pH		7.5			7.6	7.4	7.5	7.	
	O2 ppm		9.6			9.7	9.7	10.0	9.	
	Cond.		245			245	245	250	25	
	Temp(C)		15.0			15.0	15.0	15.0	15.	
10	pH		7.5			7.5	7.4	7.6	7.	
	O2 ppm		9.7			9.6	9.7	10.0	9.	
	Cond.		255			250	255	260	26	
	Temp(C)		15.0			15.0	15.0	15.0	15.	
Control	pH		7.4			7.4	7.4	7.7	7.	
	O2 ppm		9.4			9.8	9.8	9.9	10.	
	Cond.		260			260	265	265	27	
	Temp(C)		15.0			15.0	15.0	15.0	15.	

TOXICITY TEST REPORT

Sample: 03900209

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (200)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. McLaughlin
 Date Collected : 03/19/90
 Received : 03/20/90
 Tested : 03/20/90 at: 1610
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal
 95% fid. limits : 0.0 - 0.0 %
 Comments : Single Concentration Test; Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03900209

TEST CONC.	ELAPSED TIME				
%	00:00	24:00	48:00	72:00	96:00
100	pH	7.9			8.2
	O2 ppm	10.8			10.3
	Cond.	247			242
	Temp(C)	15.0	14.0	15.0	15.0
100	pH	7.9			8.1
	O2 ppm	10.8			10.1
	Cond.	247			241
	Temp(C)	15.0	14.0	15.0	15.0
Control	pH	7.9			8.4
	O2 ppm	8.2			9.9
	Cond.	549			541
	Temp(C)	15.0	14.0	15.0	15.0
Control	pH	7.9			8.4
	O2 ppm	8.2			9.9
	Cond.	549			540
	Temp(C)	15.0	14.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 03890203

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical
Control point : OT cooling water, (300)
Laboratory : BAR
Sampling Method : Grab
Sampled By : M. Rankin
Date Collected : 10/10/89
Received : 10/11/89
Tested : 10/12/89 at: 1115
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E						TOTAL MORTALITY %
	%	00:00	04:00	24:00	48:00	72:00	96:00
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal
95% fid. limits : 100.0 - 100.0 %
Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : INTUITIVE

TOXICITY TEST PARAMETERS

Sample Number: 03890203

TEST CONC. %	E L A P S E D T I M E					
	00:00	04:00	24:00	48:00	72:00	96:00

Control	pH	7.6					8.5
	O2 ppm	7.4					9.4
	Cond.	555					482
	Temp(C)	15.5	15.0	15.0	15.0	15.0	15.5
10	pH	7.8					8.4
	O2 ppm	8.4					8.7
	Cond.	536					540
	Temp(C)	15.5	15.0	15.0	15.0	15.0	15.5
20	pH	7.9					8.4
	O2 ppm	8.5					9.0
	Cond.	505					506
	Temp(C)	15.5	15.0	15.0	15.0	15.0	15.5
40	pH	7.9					8.3
	O2 ppm	8.6					8.7
	Cond.	439					447
	Temp(C)	15.5	15.0	15.0	15.0	15.0	15.5
65	pH	8.0					8.2
	O2 ppm	8.8					8.8
	Cond.	357					365
	Temp(C)	15.5	15.0	15.0	15.0	15.0	15.5
100	pH	8.1					8.0
	O2 ppm	8.8					8.8
	Cond.	238					247
	Temp(C)	15.5	15.0	15.0	15.0	15.0	15.5

TOXICITY TEST REPORT

Sample: 03890261

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : OT cooling water, (300)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Rankin
 Date Collected : 11/13/89
 Received : 11/14/89
 Tested : 11/15/89 at: 1030

Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Don Lethal

SLOPE of Mortality Curve :
 LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03890261

TEST ELAPSED TIME
 CONC. % 00:00 04:00 24:00 48:00 72:00 96:00

Control	pH	7.7					8.5
	O2 ppm	7.8					9.7
	Cond.	560					548
	Temp(C)	15.0	15.0	15.0	14.0	14.0	14.0
10	pH	7.7					8.5
	O2 ppm	7.9					9.7
	Cond.	527					517
	Temp(C)	15.0	15.0	15.0	14.0	14.0	14.0
20	pH	7.7					8.4
	O2 ppm	8.0					9.6
	Cond.	496					485
	Temp(C)	15.0	15.0	15.0	14.0	14.0	14.0
40	pH	7.8					8.5
	O2 ppm	8.5					9.7
	Cond.	433					426
	Temp(C)	15.0	15.0	15.0	14.0	14.0	14.0
65	pH	7.8					8.4
	O2 ppm	8.8					9.8
	Cond.	351					352
	Temp(C)	15.0	15.0	15.0	14.0	14.0	14.0
100	pH	8.1					8.1
	O2 ppm	9.7					9.7
	Cond.	234					241
	Temp(C)	15.0	15.0	15.0	14.0	14.0	14.0

TOXICITY TEST REPORT

Sample: 03900016

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical
Control point : OT cooling water, (300)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. McLaughlin
Date Collected : 01/09/90
Received : 01/10/90
Tested : 01/11/90 at: 1100
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	1	5
Control	0	0	0	0	0	0

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

TOXICITY TEST PARAMETERS

Sample Number: 03900016

TEST CONC.	E L A P S E D T I M E				
%	00:00	24:00	48:00	72:00	96:00
100	pH	8.2			8.2
	O2 ppm	10.3			9.6
	Cond.	242			244
	Temp(C)	15.0	14.0	15.0	15.0
Control	pH	7.9			8.4
	O2 ppm	9.1			9.7
	Cond.	563			535
	Temp(C)	15.0	14.0	15.0	15.0

MISA Trout

TOXICITY TEST REPORT

Sample: 01900027

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : OT cooling water, (300)
 Laboratory : MOE
 Sampling Method : Grab
 Sampled By : D. Hamilton
 Date Collected : 03/04/90
 Received : 03/06/90
 Tested : 03/08/90 at: 1030
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME										TOTAL MORTALITY
%	00:00	01:10	01:00	02:00	04:00	24:10	53:00	78:10	96:00	%	
100	0	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01900027

TEST CONC. %	ELAPSED TIME									
	00:00	01:10	01:00	02:00	04:00	24:10	53:00	78:10	96:00	
100	pH 7.3				7.5	7.8	7.4	7.6	7.	
	O2 ppm 9.8				9.9	9.6	9.6	9.8	9.	
	Cond. 175				175	175	175	180	18	
	Temp(C) 15.0				15.0	15.0	15.0	15.0	15.	
65	pH 7.5				7.5	7.7	7.5	7.7	7.	
	O2 ppm 9.8				9.8	9.8	9.8	10.1	9.	
	Cond. 205				205	200	205	205	20	
	Temp(C) 15.0				15.0	15.0	15.0	15.0	15.	
40	pH 7.5				7.5	7.4	7.3	7.6	7.	
	O2 ppm 9.8				9.8	9.4	9.6	9.6	9.	
	Cond. 225				225	225	230	235	23	
	Temp(C) 15.0				15.0	15.0	15.0	15.0	15.	
30	pH 7.5				7.5	7.4	7.3	7.4	7.	
	O2 ppm 9.8				9.8	9.4	9.7	9.4	9.	
	Cond. 235				235	235	235	240	24	
	Temp(C) 15.0				15.0	15.0	15.0	15.0	15.	
20	pH 7.5				7.5	7.5	7.4	7.5	7.	
	O2 ppm 9.8				9.8	9.8	9.8	9.9	9.	
	Cond. 245				245	245	245	255	25	
	Temp(C) 15.0				15.0	15.0	15.0	15.0	15.	
10	pH 7.5				7.5	7.3	7.3	7.3	7.	
	O2 ppm 9.8				9.8	9.4	9.2	9.6	9.	
	Cond. 250				250	250	255	260	26	
	Temp(C) 15.0				15.0	15.0	15.0	15.0	15.	
Control	pH 7.4				7.4	7.4	7.3	7.2	7.	
	O2 ppm 9.7				9.7	9.4	9.7	9.8	9.	
	Cond. 265				265	265	265	270	27	
	Temp(C) 15.0				15.0	15.0	15.0	15.0	15.	

TOXICITY TEST REPORT

Sample: 03900210

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : OT cooling water, (300)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. McLaughlin
 Date Collected : 03/19/90
 Received : 03/20/90
 Tested : 03/20/90 at: 1610
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test; Non-lethal

 SLOPE of Mortality Curve :
 LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03900210

TEST CONC. %	ELAPSED TIME				
	00:00	24:00	48:00	72:00	96:00
100	pH 8.0				8.0
	O2 ppm 11.2				10.0
	Cond. 231				234
	Temp(C) 15.0	14.0	15.0	15.0	14.0
100	pH 8.0				8.1
	O2 ppm 11.2				10.1
	Cond. 231				236
	Temp(C) 15.0	14.0	15.0	15.0	14.0
Control	pH 7.9				8.4
	O2 ppm 8.2				10.1
	Cond. 549				543
	Temp(C) 15.0	14.0	15.0	15.0	14.0
Control	pH 7.9				8.3
	O2 ppm 8.2				9.9
	Cond. 549				541
	Temp(C) 15.0	14.0	15.0	15.0	14.0

TOXICITY TEST REPORT

Sample: 03890207

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (500)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Rankin
 Date Collected : 10/10/89
 Received : 10/11/89
 Tested : 10/12/89 at: 1400
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 100.0 - 100.0 %

Comments :

SLOPE of Mortality Curve :
 LC50 Calculated By : INTUITIVE

TOXICITY TEST PARAMETERS

Sample Number: 03890207

TEST CONC. %	ELAPSED TIME					
	00:00	04:00	24:00	48:00	72:00	96:00

Control	pH	7.7					8.4
	O2 ppm	7.9					9.1
	Cond.	558					564
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0
10	pH	7.6					8.3
	O2 ppm	8.8					9.0
	Cond.	574					577
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0
20	pH	7.7					8.2
	O2 ppm	7.5					8.7
	Cond.	593					597
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0
40	pH	7.7					8.2
	O2 ppm	7.8					8.9
	Cond.	626					627
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0
65	pH	7.8					8.2
	O2 ppm	8.3					9.1
	Cond.	656					667
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0
100	pH	8.2					7.9
	O2 ppm	8.6					9.0
	Cond.	718					722
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 03890257

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (500)
Laboratory : BAR
Sampling Method : Grab
Sampled By : M. Rankin
Date Collected : 11/13/89
Received : 11/14/89
Tested : 11/15/89 at: 1230
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
	%	00:00	04:00	24:00	48:00	72:00	96:00
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03890257

TEST CONC. %		ELAPSED TIME					
		00:00	04:00	24:00	48:00	72:00	96:00
Control	pH	7.6					8.5
	O2 ppm	7.0					9.6
	Cond.	559					559
	Temp(C)	15.0	15.0	15.0	14.0	14.0	14.0
10	pH	7.7					8.5
	O2 ppm	7.2					9.7
	Cond.	572					578
	Temp(C)	15.0	15.0	15.0	14.0	14.0	14.0
20	pH	7.7					8.5
	O2 ppm	7.1					9.6
	Cond.	588					588
	Temp(C)	15.0	15.0	15.0	14.0	14.0	14.0
40	pH	7.8					8.4
	O2 ppm	7.8					9.7
	Cond.	617					637
	Temp(C)	15.0	15.0	15.0	14.0	14.0	14.0
65	pH	7.9					8.4
	O2 ppm	8.1					9.6
	Cond.	657					682
	Temp(C)	15.0	15.0	15.0	14.0	14.0	14.0
100	pH	8.2					8.4
	O2 ppm	9.4					9.7
	Cond.	712					740
	Temp(C)	15.0	15.0	15.0	14.0	14.0	14.0

MISA Trout

SLOPE of Mortality Curve :
LC50 Calculated By : Intuitive

TOXICITY TEST REPORT

Sample: 03890360

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (500)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. McLaughlin
Date Collected : 12/13/89
Received : 12/14/89
Tested : 12/17/89 at: 930
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY	
	%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

TOXICITY TEST PARAMETERS

Sample Number: 03890360

TEST CONC.	ELAPSED TIME				
	%	00:00	24:00	48:00	72:00

100	pH	8.1				8.3
	O2 ppm	9.5				10.0
	Cond.	1821				1847
	Temp(C)	15.0	14.0	14.0	14.0	14.0
65	pH	8.0				8.3
	O2 ppm	9.1				9.6
	Cond.	1390				1403
	Temp(C)	15.0	14.0	14.0	14.0	14.0
40	pH	7.9				8.2
	O2 ppm	8.9				9.2
	Cond.	1071				1078
	Temp(C)	15.0	14.0	14.0	14.0	14.0
20	pH	7.9				8.3
	O2 ppm	8.7				8.7
	Cond.	811				819
	Temp(C)	15.0	14.0	14.0	14.0	14.0
10	pH	7.9				8.4
	O2 ppm	8.7				9.7
	Cond.	701				699
	Temp(C)	15.0	14.0	14.0	14.0	14.0
5	pH	7.9				8.3
	O2 ppm	8.7				9.3
	Cond.	618				631
	Temp(C)	15.0	14.0	14.0	14.0	14.0
Control	pH	7.8				8.4
	O2 ppm	8.7				9.2
	Cond.	554				557
	Temp(C)	15.0	14.0	14.0	14.0	14.0

TOXICITY TEST REPORT

Sample: 03900015

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (500)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. McLaughlin
Date Collected : 01/09/90
Received : 01/10/90
Tested : 01/11/90 at: 1100
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
	%	00:00	24:00	48:00	72:00	
100	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03900015

TEST CONC. %	ELAPSED TIME				
	00:00	24:00	48:00	72:00	96:00

100	pH	8.2				8.4
	O2 ppm	10.3				9.7
	Cond.	1597				1613
	Temp(C)	15.0	14.0	14.0	14.0	14.5
Control	pH	7.9				8.5
	O2 ppm	9.1				9.9
	Cond.	563				547
	Temp(C)	15.0	14.0	14.0	14.0	14.5

TOXICITY TEST REPORT

Sample: 03900112

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (500)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. McLaughlin
 Date Collected : 02/13/90
 Received : 02/14/90
 Tested : 02/14/90 at: 1530
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal
 95% fid. limits : 0.0 - 0.0 %
 Comments : Single Concentration Test

SLOPE of Mortality Curve :
 LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03900112

TEST CONC. %	ELAPSED TIME				
	00:00	24:00	48:00	72:00	96:00
100	pH	8.1			8.1
	O2 ppm	10.1			9.4
	Cond.	1273			1331
	Temp(C)	15.0	15.0	14.0	14.0
100	pH	8.1			8.1
	O2 ppm	10.1			8.8
	Cond.	1273			1318
	Temp(C)	15.0	15.0	14.0	14.0
Control	pH	7.9			8.4
	O2 ppm	9.2			8.8
	Cond.	533			542
	Temp(C)	15.0	15.0	14.0	14.0
Control	pH	7.9			8.5
	O2 ppm	9.2			9.5
	Cond.	533			540
	Temp(C)	15.0	15.0	14.0	14.0

TOXICITY TEST REPORT

Sample: 01900029

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (500)
Laboratory : MOE
Sampling Method : Grab
Sampled By : D. Hamilton
Date Collected : 03/04/90
Received : 03/06/90
Tested : 03/08/90 at: 1400
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME										TOTAL MORTALITY
%	00:00	00:30	01:00	02:00	04:00	20:30	50:00	74:30	96:00	%	
100	0	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01900029

TEST CONC. %	ELAPSED TIME									
	00:00	00:30	01:00	02:00	04:00	20:30	50:00	74:30	96:00	
100	pH	0.7	7.8		7.7	7.8	7.9	8.		
	O2 ppm	9.8	9.7		8.8	9.6	9.8	9.		
	Cond.	980	980		760	960	980	100		
	Temp(C)	15.0	15.0		15.0	15.0	15.0	15.		
65	pH		7.8		7.8	7.7	7.8	7.		
	O2 ppm		9.8		9.7	9.6	9.8	9.		
	Cond.		740		720	720	740	74		
	Temp(C)		15.0		15.0	15.0	15.0	15.		
40	pH		7.7		7.8	7.7	7.8	7.		
	O2 ppm		9.7		9.7	9.7	9.8	9.		
	Cond.		560		550	540	560	56		
	Temp(C)		15.0		15.0	15.0	15.0	15.		
30	pH		7.6		7.7	7.7	7.8	7.		
	O2 ppm		9.8		9.7	9.7	9.8	9.		
	Cond.		485		475	480	485	49		
	Temp(C)		15.0		15.0	15.0	15.0	15.		
20	pH		7.5		7.4	7.3	7.4	7.		
	O2 ppm		9.6		9.0	8.8	8.9	8.		
	Cond.		410		410	405	415	41		
	Temp(C)		15.0		15.0	15.0	15.0	15.		
10	pH		7.5		7.3	7.6	7.8	7.		
	O2 ppm		9.7		8.0	9.8	9.8	9.		
	Cond.		355		355	350	355	36		
	Temp(C)		15.0		15.0	15.0	15.0	15.		
Control	pH		7.4		7.5	7.4	7.6	7.		
	O2 ppm		9.6		9.6	9.7	9.7	9.		
	Cond.		265		260	260	270	27		
	Temp(C)		15.0		15.0	15.0	15.0	15.		

MISA Trout

SLOPE of Mortality Curve :
LC50 Calculated By : Intuitive

TOXICITY TEST REPORT

Sample: 03900211

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (500)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. McLaughlin
Date Collected : 03/19/90
Received : 03/20/90
Tested : 03/20/90 at: 1740
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test; Non-lethal

TOXICITY TEST PARAMETERS

Sample Number: 03900211

TEST CONC. %	ELAPSED TIME				
	00:00	24:00	48:00	72:00	96:00
100	pH	8.1			8.0
	O2 ppm	10.5			10.1
	Cond.	338			338
	Temp(C)	15.0	14.0	15.0	15.0
100	pH	8.1			8.0
	O2 ppm	10.5			9.6
	Cond.	338			341
	Temp(C)	15.0	14.0	15.0	15.0
Control	pH	7.9			8.3
	O2 ppm	8.2			9.8
	Cond.	549			539
	Temp(C)	15.0	14.0	15.0	15.0
Control	pH	7.9			8.2
	O2 ppm	8.2			9.8
	Cond.	549			542
	Temp(C)	15.0	14.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 03890209

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (600)
Laboratory : BAR
Sampling Method : Grab
Sampled By : M. Rankin
Date Collected : 10/10/89
Received : 10/11/89
Tested : 10/12/89 at: 1400
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
	%	00:00	04:00	24:00	48:00	72:00	96:00
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 100.0 - 100.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : INTUITIVE

TOXICITY TEST PARAMETERS

Sample Number: 03890209

TEST CONC. %	ELAPSED TIME					
	00:00	04:00	24:00	48:00	72:00	96:00

Control	pH	7.7					8.4
	O2 ppm	7.9					9.1
	Cond.	558					564
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0
10	pH	7.8					8.4
	O2 ppm	7.9					9.0
	Cond.	528					534
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0
20	pH	7.8					8.4
	O2 ppm	8.2					9.0
	Cond.	496					504
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0
40	pH	7.8					8.2
	O2 ppm	8.2					8.9
	Cond.	436					445
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0
65	pH	7.9					8.0
	O2 ppm	8.4					8.8
	Cond.	357					367
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0
100	pH	8.1					8.0
	O2 ppm	8.7					9.2
	Cond.	244					255
	Temp(C)	15.0	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 03890258

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (600)
Laboratory : BAR
Sampling Method : Grab
Sampled By : M. Rankin
Date Collected : 11/13/89
Received : 11/14/89
Tested : 11/15/89 at: 1230
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

TOXICITY TEST PARAMETERS

Sample Number: 03890258

TEST CONC. %	ELAPSED TIME						
	00:00	04:00	24:00	48:00	72:00	96:00	
Control	pH 7.7 O2 ppm 7.2 Cond. 563 Temp(C) 15.0	15.0	15.0	14.0	14.0	14.0	8.5 9.4 561
10	pH 7.7 O2 ppm 7.4 Cond. 534 Temp(C) 15.0	15.0	15.0	14.0	14.0	14.0	8.5 9.7 535
20	pH 7.7 O2 ppm 8.1 Cond. 497 Temp(C) 15.0	15.0	15.0	14.0	14.0	14.0	8.4 9.6 511
40	pH 7.7 O2 ppm 8.4 Cond. 435 Temp(C) 15.0	15.0	15.0	14.0	14.0	14.0	8.4 9.8 455
65	pH 7.8 O2 ppm 8.8 Cond. 357 Temp(C) 15.0	15.0	15.0	14.0	14.0	14.0	8.3 9.5 362
100	pH 8.0 O2 ppm 9.5 Cond. 238 Temp(C) 15.0	15.0	15.0	14.0	14.0	14.0	8.2 9.6 250

TOXICITY TEST REPORT

Sample: 03890356

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (600)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. McLaughlin
Date Collected : 12/13/89
Received : 12/14/89
Tested : 12/17/89 at: 1000
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03890356

TEST CONC. %	ELAPSED TIME				
	00:00	24:00	48:00	72:00	96:00

100	pH	8.1				8.0
	O2 ppm	9.1				9.2
	Cond.	259				268
	Temp(C)	14.0	14.0	14.0	14.0	14.0
65	pH	8.0				8.0
	O2 ppm	9.2				8.8
	Cond.	365				375
	Temp(C)	14.0	14.0	14.0	14.0	14.0
40	pH	7.9				8.4
	O2 ppm	9.0				9.4
	Cond.	440				447
	Temp(C)	14.0	14.0	14.0	14.0	14.0
20	pH	7.9				8.4
	O2 ppm	8.7				9.2
	Cond.	498				500
	Temp(C)	14.0	14.0	14.0	14.0	14.0
10	pH	7.9				8.4
	O2 ppm	8.6				9.0
	Cond.	526				523
	Temp(C)	14.0	14.0	14.0	14.0	14.0
5	pH	7.9				8.4
	O2 ppm	8.1				9.2
	Cond.	539				539
	Temp(C)	14.0	14.0	14.0	14.0	14.0
Control	pH	7.8				8.4
	O2 ppm	8.7				9.3
	Cond.	554				557
	Temp(C)	14.0	14.0	14.0	14.0	14.0

MISA Trout

TOXICITY TEST REPORT

Sample: 03900013

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (600)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. McLaughlin
Date Collected : 01/09/90
Received : 01/10/90
Tested : 01/11/90 at: 1100
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03900013

TEST CONC.	ELAPSED TIME				
%	00:00	24:00	48:00	72:00	96:00
100	pH	8.0			8.0
	O2 ppm	10.1			9.0
	Cond.	250			260
	Temp(C)	15.0	14.0	15.0	15.0
Control	pH	8.0			8.3
	O2 ppm	9.1			8.9
	Cond.	563			575
	Temp(C)	15.0	14.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 03900113

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 : Sarnia, ONT
 : (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (600)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. McLaughlin
 Date Collected : 02/13/90
 Received : 02/14/90
 Tested : 02/14/90 at: 1530
 Type of Bioassay : STATIC
 : (Protocol to determine the acute lethality
 : of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single concentration test - Non lethal

 SLOPE of Mortality Curve :
 LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03900113

TEST CONC. %	E L A P S E D T I M E				
	00:00	24:00	48:00	72:00	96:00

100	pH	8.1				8.1
	O2 ppm	10.1				9.3
	Cond.	234				249
	Temp(C)	15.0	15.0	14.0	14.0	14.0
100	pH	8.1				8.2
	O2 ppm	10.1				9.6
	Cond.	234				253
	Temp(C)	15.0	15.0	14.0	14.0	14.0
Control	pH	8.0				8.5
	O2 ppm	9.2				9.2
	Cond.	541				529
	Temp(C)	15.0	15.0	14.0	14.0	14.0
Control	pH	8.0				8.5
	O2 ppm	9.2				8.5
	Cond.	541				536
	Temp(C)	15.0	15.0	14.0	14.0	14.0

TOXICITY TEST REPORT

Sample: 01900031

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (600)
 Laboratory : MOE
 Sampling Method : Grab
 Sampled By : D. Hamilton
 Date Collected : 03/05/90
 Received : 03/06/90
 Tested : 03/08/90 at: 1400
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME										TOTAL MORTALITY
%	00:00	00:30	01:00	02:00	04:00	21:00	50:30	72:00	96:00	%	
100	0	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01900031

TEST CONC. %	ELAPSED TIME									
	00:00	00:30	01:00	02:00	04:00	21:00	50:30	72:00	96:00	
100	pH	7.4		7.5		7.5	7.4	7.6	7.	
	O2 ppm	9.2		9.6		9.6	9.5	9.7	9.	
	Cond.	180		180		180	180	185	18	
	Temp(C)	15.0		15.0		15.0	15.0	15.0	15.	
65	pH			7.4		7.6	7.5	7.6	7.	
	O2 ppm			9.7		9.9	9.6	9.9	9.	
	Cond.			210		205	210	215	21	
	Temp(C)			15.0		15.0	15.0	15.0	15.	
40	pH			7.4		7.5	7.5	7.7	7.	
	O2 ppm			9.8		9.8	9.8	9.8	9.	
	Cond.			235		230	230	235	23	
	Temp(C)			15.0		15.0	15.0	15.0	15.	
30	pH			7.4		7.5	7.5	7.6	7.	
	O2 ppm			9.7		9.8	10.0	10.1	10.	
	Cond.			245		245	240	245	23	
	Temp(C)			15.0		15.0	15.0	15.0	15.	
20	pH			7.1		7.6	7.6	7.7	7.	
	O2 ppm			9.6		9.9	9.9	9.9	10.	
	Cond.			280		250	250	250	26	
	Temp(C)			15.0		15.0	15.0	15.0	15.	
10	pH			7.3		7.6	7.6	7.7	7.	
	O2 ppm			9.7		9.7	9.6	9.8	9.	
	Cond.			260		255	260	260	26	
	Temp(C)			15.0		15.0	15.0	15.0	15.	
Control	pH			7.0		7.6	7.6	7.8	7.	
	O2 ppm			9.8		9.9	9.8	9.8	9.	
	Cond.			270		265	265	270	27	
	Temp(C)			15.0		15.0	15.0	15.0	15.	

TOXICITY TEST REPORT

Sample: 03900212

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical

Control point : combined effluent, (600)

Laboratory : BAR
Sampling Method : Grab
Sampled By : D. McLaughlin
Date Collected : 03/19/90
Received : 03/20/90
Tested : 03/20/90 at: 1730

Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
	%	00:00	24:00	48:00	72:00	
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test; Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03900212

TEST CONC. %		ELAPSED TIME				
		00:00	24:00	48:00	72:00	96:00
100	pH	8.0				8.0
	O2 ppm	10.8				10.0
	Cond.	253				250
	Temp(C)	15.0	14.0	15.0	15.0	14.5
100	pH	8.0				8.0
	O2 ppm	10.8				10.2
	Cond.	253				250
	Temp(C)	15.0	14.0	15.0	15.0	14.5
Control	pH	7.9				8.4
	O2 ppm	8.2				10.2
	Cond.	549				542
	Temp(C)	15.0	14.0	15.0	15.0	14.5
Control	pH	7.9				8.4
	O2 ppm	8.2				10.2
	Cond.	549				537
	Temp(C)	15.0	14.0	15.0	15.0	14.5

TOXICITY TEST REPORT

Sample: 03890205

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (700)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Rankin
 Date Collected : 10/10/89
 Received : 10/11/89
 Tested : 10/12/89 at: 1115
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY %
	%	00:00	04:00	24:00	48:00	72:00	96:00
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal
 95% fid. limits : 100.0 - 100.0 %
 Comments :

SLOPE of Mortality Curve :
 LC50 Calculated By : INTUITIVE

TOXICITY TEST PARAMETERS

Sample Number: 03890205

TEST CONC. %	ELAPSED TIME					
	00:00	04:00	24:00	48:00	72:00	96:00

Control	pH	7.6					8.4
	O2 ppm	7.4					8.9
	Cond.	555					568
	Temp(C)	15.5	15.0	15.0	15.0	15.0	
10	pH	7.7					8.4
	O2 ppm	7.9					8.7
	Cond.	531					535
	Temp(C)	15.5	15.0	15.0	15.0	15.0	15.5
20	pH	7.8					8.4
	O2 ppm	8.1					9.0
	Cond.	501					505
	Temp(C)	15.5	15.0	15.0	15.0	15.0	15.5
40	pH	7.8					8.3
	O2 ppm	8.3					8.7
	Cond.	439					448
	Temp(C)	15.5	15.0	15.0	15.0	15.0	15.5
65	pH	7.8					8.1
	O2 ppm	8.3					8.5
	Cond.	360					369
	Temp(C)	15.5	15.0	15.0	15.0	15.0	15.5
100	pH	8.0					7.9
	O2 ppm	8.6					8.6
	Cond.	244					256
	Temp(C)	15.5	15.0	15.0	15.0	15.0	15.5

TOXICITY TEST REPORT

Sample: 03890259

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (700)
Laboratory : BAR
Sampling Method : Grab
Sampled By : M. Rankin
Date Collected : 11/13/89
Received : 11/14/89
Tested : 11/15/89 at: 1130
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E						TOTAL MORTALITY
	%	00:00	04:00	24:00	48:00	72:00	96:00
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03890259

TEST CONC. %	E L A P S E D T I M E					
	00:00	04:00	24:00	48:00	72:00	96:00

Control	pH	7.7					8.5
	O2 ppm	7.2					9.7
	Cond.	560					554
	Temp(C)	15.0	15.0	15.0	14.0	14.0	14.0
10	pH	7.7					8.5
	O2 ppm	7.3					9.6
	Cond.	540					534
	Temp(C)	15.0	15.0	15.0	14.0	14.0	14.0
20	pH	7.7					8.4
	O2 ppm	7.3					9.7
	Cond.	500					498
	Temp(C)	15.0	15.0	15.0	14.0	14.0	14.0
40	pH	7.7					8.5
	O2 ppm	8.0					9.7
	Cond.	440					446
	Temp(C)	15.0	15.0	15.0	14.0	14.0	14.0
65	pH	7.9					8.1
	O2 ppm	8.3					9.6
	Cond.	356					369
	Temp(C)	15.0	15.0	15.0	14.0	14.0	14.0
100	pH	8.2					8.0
	O2 ppm	9.5					9.4
	Cond.	236					245
	Temp(C)	15.0	15.0	15.0	14.0	14.0	14.0

TOXICITY TEST REPORT

Sample: 03890358

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (700)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. McLaughlin
 Date Collected : 12/13/89
 Received : 12/14/89
 Tested : 12/17/89 at: 900
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
 LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03890358

TEST CONC. %	ELAPSED TIME				
	00:00	24:00	48:00	72:00	96:00
100	pH 8.1				7.8
	O2 ppm 9.5				8.7
	Cond. 251				261
	Temp(C) 15.0	14.0	14.0	14.0	14.0
65	pH 8.1				7.9
	O2 ppm 9.6				9.0
	Cond. 254				262
	Temp(C) 15.0	14.0	14.0	14.0	14.0
40	pH 7.9				8.0
	O2 ppm 8.9				8.6
	Cond. 436				450
	Temp(C) 15.0	14.0	14.0	14.0	14.0
20	pH 7.9				8.4
	O2 ppm 8.8				9.9
	Cond. 499				507
	Temp(C) 15.0	14.0	14.0	14.0	14.0
10	pH 7.9				8.4
	O2 ppm 8.6				9.6
	Cond. 526				535
	Temp(C) 15.0	14.0	14.0	14.0	14.0
5	pH 7.9				8.5
	O2 ppm 8.7				9.9
	Cond. 554				558
	Temp(C) 15.0	14.0	14.0	14.0	14.0
Control	pH 7.8				8.5
	O2 ppm 8.7				9.3
	Cond. 534				554
	Temp(C) 15.0	14.0	14.0	14.0	14.0

TOXICITY TEST REPORT

Sample: 03900014

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (700)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. McLaughlin
Date Collected : 01/09/90
Received : 01/10/90
Tested : 01/11/90 at: 1100
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments : Non-lethal

TOXICITY TEST PARAMETERS

Sample Number: 03900014

TEST CONC.	ELAPSED TIME				
%	00:00	24:00	48:00	72:00	96:00

100	pH	8.1				8.1
	O2 ppm	10.5				9.1
	Cond.	247				258
	Temp(C)	15.0	14.0	15.0	15.0	14.5
Control	pH	7.9				8.4
	O2 ppm	9.1				9.2
	Cond.	563				580
	Temp(C)	15.0	14.0	15.0	15.0	14.5

MISA Trout

TOXICITY TEST REPORT

Sample: 03900114

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (700)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. McLaughlin
 Date Collected : 02/13/90
 Received : 02/14/90
 Tested : 02/14/90 at: 1530

Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal
 95% fid. limits : 0.0 - 0.0 %
 Comments : Single Concentration Test

SLOPE of Mortality Curve :
 LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03900114

TEST CONC. %	ELAPSED TIME				
	00:00	24:00	48:00	72:00	96:00
100	pH	8.1			8.0
	O2 ppm	10.1			8.8
	Cond.	228			236
	Temp(C)	15.0	15.0	14.0	14.0
100	pH	8.1			8.2
	O2 ppm	10.1			9.7
	Cond.	228			236
	Temp(C)	15.0	15.0	14.0	14.0
Control	pH	7.9			8.5
	O2 ppm	9.3			9.5
	Cond.	533			537
	Temp(C)	15.0	15.0	14.0	14.0
Control	pH	7.9			8.5
	O2 ppm	9.3			9.1
	Cond.	533			536
	Temp(C)	15.0	15.0	14.0	14.0

TOXICITY TEST REPORT

Sample: 01900030

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (700)
Laboratory : MOE
Sampling Method : Grab
Sampled By : D. Hamilton
Date Collected : 03/05/90
Received : 03/05/90
Tested : 03/08/90 at: 1100
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME										TOTAL MORTALITY
	%	00:00	00:30	01:00	02:00	04:00	24:00	54:00	78:00	96:00	%
100	0	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01900030

TEST CONC. %	ELAPSED TIME									
		00:00	00:30	01:00	02:00	04:00	24:00	54:00	78:00	96:00
100	pH		7.4			7.5	7.5	7.3	7.5	7.
	O2 ppm		9.1			9.4	9.4	9.3	9.4	9.
	Cond.		175			175	175	175	180	18
	Temp(C)		15.0			15.0	15.0	15.0	15.0	15.
65	pH				7.4	7.4	7.3	7.5	7.	
	O2 ppm				9.6	9.4	9.3	9.3	9.	
	Cond.				205	206	210	210	21	
	Temp(C)				15.0	15.0	15.0	15.0	15.	
40	pH				7.3	7.5	7.4	7.6	7.	
	O2 ppm				9.6	9.6	9.5	9.6	9.	
	Cond.				225	230	235	235	24	
	Temp(C)				15.0	15.0	15.0	15.0	15.	
30	pH				6.9	7.6	7.6	7.7	7.	
	O2 ppm				9.6	9.6	9.6	9.7	9.	
	Cond.				230	240	240	245	25	
	Temp(C)				15.0	15.0	15.0	15.0	15.	
20	pH				7.5	7.5	7.5	7.6	7.	
	O2 ppm				9.6	9.6	9.5	9.5	9.	
	Cond.				240	250	255	250	26	
	Temp(C)				15.0	15.0	15.0	15.0	15.	
10	pH				7.5	7.5	7.5	7.6	7.	
	O2 ppm				9.8	9.5	9.4	9.5	9.	
	Cond.				250	255	260	265	26	
	Temp(C)				15.0	15.0	15.0	15.0	15.	
Control	pH				7.4	7.5	7.5	7.7	7.	
	O2 ppm				9.7	9.7	9.7	9.7	9.	
	Cond.				280	270	270	275	27	
	Temp(C)				15.0	15.0	15.0	15.0	15.	

TOXICITY TEST REPORT

Sample: 03900213

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (700)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. McLaughlin
Date Collected : 03/19/90
Received : 03/20/90
Tested : 03/20/90 at: 1700
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test; Non-lethal

TOXICITY TEST PARAMETERS

Sample Number: 03900213

TEST CONC. %	ELAPSED TIME				
	00:00	24:00	48:00	72:00	96:00
100	pH 8.1				8.0
	O2 ppm 10.2				10.2
	Cond. 237				240
	Temp(C) 15.0	14.0	15.0	15.0	14.5
100	pH 8.1				8.1
	O2 ppm 10.2				10.2
	Cond. 237				241
	Temp(C) 15.0	14.0	15.0	15.0	14.5
Control	pH 7.9				8.4
	O2 ppm 8.4				10.2
	Cond. 546				534
	Temp(C) 15.0	14.0	15.0	15.0	14.5
Control	pH 7.9				8.4
	O2 ppm 8.4				10.1
	Cond. 546				536
	Temp(C) 15.0	14.0	15.0	15.0	14.5

TOXICITY TEST REPORT

Sample: 03890202

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (900)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Rankin
 Date Collected : 10/10/89
 Received : 10/11/89
 Tested : 10/12/89 at: 1115

Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY	
	%	00:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 100.0 - 100.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
 LC50 Calculated By : INTUITIVE

TOXICITY TEST PARAMETERS

Sample Number: 03890202

TEST CONC.	%	ELAPSED TIME					
		00:00	04:00	24:00	48:00	72:00	96:00
Control	pH	7.6					8.4
	O2 ppm	7.4					8.9
	Cond.	555					567
	Temp(C)	15.5	15.0	15.0	15.0	15.0	15.5
10	pH	7.7					8.3
	O2 ppm	8.1					8.8
	Cond.	855					884
	Temp(C)	15.5	15.0	15.0	15.0	15.0	15.5
20	pH	7.8					8.3
	O2 ppm	8.3					8.6
	Cond.	1150					1173
	Temp(C)	15.5	15.0	15.0	15.0	15.0	15.5
40	pH	7.9					8.3
	O2 ppm	8.6					8.7
	Cond.	1780					1783
	Temp(C)	15.5	15.0	15.0	15.0	15.0	15.5
65	pH	8.0					8.2
	O2 ppm	8.7					8.9
	Cond.	2520					2540
	Temp(C)	15.5	15.0	15.0	15.0	15.0	15.5
100	pH	8.4					7.9
	O2 ppm	9.0					8.7
	Cond.	3550					3580
	Temp(C)	15.5	15.0	15.0	15.0	15.0	15.5

MISA Trout

SLOPE of Mortality Curve :
LC50 Calculated By : Intuitive

TOXICITY TEST REPORT

Sample: 03890260

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (900)
Laboratory : BAR
Sampling Method : Grab
Sampled By : M. Rankin
Date Collected : 11/13/89
Received : 11/14/89
Tested : 11/15/89 at: 1100
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

TOXICITY TEST PARAMETERS

Sample Number: 03890260

TEST CONC. %	ELAPSED TIME					
	00:00	04:00	24:00	48:00	72:00	96:00
Control	pH 7.7 O2 ppm 7.4 Cond. 560 Temp(C) 15.0					8.5 9.5 556 14.0
10	pH 7.7 O2 ppm 7.4 Cond. 862 Temp(C) 15.0		15.0	15.0	14.0	8.5 9.7 856 14.0
20	pH 7.7 O2 ppm 7.8 Cond. 1177 Temp(C) 15.0		15.0	15.0	14.0	8.5 9.8 1167 14.0
40	pH 7.8 O2 ppm 8.4 Cond. 1773 Temp(C) 15.0		15.0	15.0	14.0	8.3 9.5 1787 14.0
65	pH 8.0 O2 ppm 8.9 Cond. 2520 Temp(C) 15.0		15.0	15.0	14.0	8.3 9.7 2530 14.0
100	pH 8.5 O2 ppm 9.3 Cond. 3550 Temp(C) 15.0		15.0	15.0	14.0	7.8 9.6 3580 14.0

TOXICITY TEST REPORT

Sample: 03890361

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 : Sarnia, ONT
 : (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (900)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. McLaughlin
 Date Collected : 12/13/89
 Received : 12/14/89
 Tested : 12/17/89 at: 900
 Type of Bioassay : STATIC
 : (Protocol to determine the acute lethality
 : of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY	
	%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
 LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03890361

TEST CONC.	ELAPSED TIME				
	%	00:00	24:00	48:00	72:00

100	pH	8.1				7.9
	O2 ppm	9.9				9.1
	Cond.	3710				3770
	Temp(C)	15.0	14.0	14.0	14.0	14.0
65	pH	8.1				8.0
	O2 ppm	9.6				8.9
	Cond.	2680				2660
	Temp(C)	15.0	14.0	14.0	14.0	14.0
40	pH	7.9				8.2
	O2 ppm	9.0				9.7
	Cond.	1841				1870
	Temp(C)	15.0	14.0	14.0	14.0	14.0
20	pH	7.9				8.2
	O2 ppm	8.8				9.9
	Cond.	1202				1214
	Temp(C)	15.0	14.0	14.0	14.0	14.0
10	pH	7.9				8.4
	O2 ppm	8.6				9.8
	Cond.	882				884
	Temp(C)	15.0	14.0	14.0	14.0	14.0
5	pH	7.9				8.5
	O2 ppm	8.3				8.9
	Cond.	713				725
	Temp(C)	15.0	14.0	14.0	14.0	14.0
Control	pH	7.8				8.4
	O2 ppm	8.7				9.3
	Cond.	554				559
	Temp(C)	15.0	14.0	14.0	14.0	14.0

MISA Trout

SLOPE of Mortality Curve :
LC50 Calculated By : Intuitive

TOXICITY TEST REPORT

Sample: 03900012

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (900)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. McLaughlin
Date Collected : 01/09/90
Received : 01/10/90
Tested : 01/11/90 at: 1100
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
	%	00:00	24:00	48:00	72:00	
100	0	0	1	1	1	5
Control	0	0	0	0	0	0

96 Hour LC50 : >100%
95% fid. limits : 0.0 - 0.0 %
Comments : LC50 >100

TOXICITY TEST PARAMETERS

Sample Number: 03900012

TEST CONC.	%	ELAPSED TIME				
		00:00	24:00	48:00	72:00	96:00
100	pH	8.1				7.9
	O2 ppm	10.3				9.0
	Cond.	3640				3640
	Temp(C)	15.0	14.0	15.0	15.0	15.0
Control	pH	7.9				8.4
	O2 ppm	9.1				9.3
	Cond.	563				557
	Temp(C)	15.0	14.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 03900115

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (900)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. McLaughlin
 Date Collected : 02/13/90
 Received : 02/14/90
 Tested : 02/14/90 at: 1530
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
	%	00:00	24:00	48:00	72:00	
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration test

SLOPE of Mortality Curve :
 LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03900115

TEST CONC.	%	ELAPSED TIME				
		00:00	24:00	48:00	72:00	96:00
100	pH	8.7				8.1
	O2 ppm	10.2				8.9
	Cond.	2990				3130
	Temp(C)	15.0	15.0	14.0	14.0	14.0
100	pH	8.7				8.1
	O2 ppm	10.2				9.2
	Cond.	2990				3100
	Temp(C)	15.0	15.0	14.0	14.0	14.0
Control	pH	7.9				8.4
	O2 ppm	9.2				9.6
	Cond.	543				540
	Temp(C)	15.0	15.0	14.0	14.0	14.0
Control	pH	7.9				8.5
	O2 ppm	9.2				9.5
	Cond.	543				544
	Temp(C)	15.0	15.0	14.0	14.0	14.0

MISA Trout

TOXICITY TEST REPORT

Sample: 01900032

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical

Control point : combined effluent, (900)

Laboratory : MOE
 Sampling Method : Grab
 Sampled By : D. Hamilton
 Date Collected : 03/05/90
 Received : 03/06/90
 Tested : 03/08/90 at: 1400

Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME										TOTAL MORTALITY
	%	00:00	00:30	01:00	02:00	04:00	21:30	42:00	66:30	96:00	%
100	0	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01900032

TEST CONC.	%	ELAPSED TIME									
		00:00	00:30	01:00	02:00	04:00	21:30	42:00	66:30	96:00	
100	pH			7.7		7.6		7.4	7.2	7.2	7.
	O2 ppm			9.2		9.2		8.3	8.3	8.1	7.
	Cond.			2000		1950		1960	1980	2000	200
	Temp(C)			15.0		15.0		15.0	15.0	15.0	15.
65	pH					7.6		7.6	7.6	7.6	7.
	O2 ppm					9.7		9.6	9.5	9.4	9.
	Cond.					1400		1390	1400	1420	142
	Temp(C)					15.0		15.0	15.0	15.0	15.
40	pH					7.6		7.5	7.7	7.7	7.
	O2 ppm					9.9		9.8	9.7	9.8	9.
	Cond.					960		950	960	980	98
	Temp(C)					15.0		15.0	15.0	15.0	15.
30	pH					7.6		7.6	7.6	7.7	7.
	O2 ppm					9.8		9.7	9.6	9.9	9.
	Cond.					790		785	790	800	80
	Temp(C)					15.0		15.0	15.0	15.0	15.
20	pH					7.5		7.6	7.6	7.7	7.
	O2 ppm					9.8		9.8	9.8	9.8	9.
	Cond.					620		620	620	640	64
	Temp(C)					15.0		15.0	15.0	15.0	15.
10	pH					7.5		7.7	7.6	7.7	7.
	O2 ppm					9.9		9.9	9.9	10.0	10.
	Cond.					475		470	480	485	49
	Temp(C)					15.0		15.0	15.0	15.0	15.
Control	pH					7.6		7.6	7.6	7.7	7.
	O2 ppm					9.9		9.9	9.8	9.9	9.
	Cond.					275		275	275	280	27
	Temp(C)					15.0		15.0	15.0	15.0	15.

TOXICITY TEST REPORT

Sample: 03900214

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (900)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. McLaughlin
Date Collected : 03/19/90
Received : 03/20/90
Tested : 03/20/90 at: 1640
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
	%	00:00	24:00	48:00	72:00	
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test; Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03900214

TEST CONC.	%	ELAPSED TIME				
		00:00	24:00	48:00	72:00	96:00
100	pH	8.0				8.0
	O2 ppm	9.9				10.1
	Cond.	1655				1673
	Temp(C)	15.0	14.0	15.0	15.0	14.5
100	pH	8.0				8.0
	O2 ppm	9.9				10.2
	Cond.	1655				1672
	Temp(C)	15.0	14.0	15.0	15.0	14.5
Control	pH	7.9				8.5
	O2 ppm	8.3				10.3
	Cond.	546				539
	Temp(C)	15.0	14.0	15.0	15.0	14.5
Control	pH	7.9				8.4
	O2 ppm	8.3				10.2
	Cond.	546				536
	Temp(C)	15.0	14.0	15.0	15.0	14.5

TOXICITY TEST REPORT

Sample: 03890204

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : OT cooling water, (1000)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Rankin
 Date Collected : 10/10/89
 Received : 10/11/89
 Tested : 10/12/89 at: 1115
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 100.0 - 100.0 %

Comments :

SLOPE of Mortality Curve :
 LC50 Calculated By : INTUITIVE

TOXICITY TEST PARAMETERS

Sample Number: 03890204

TEST ELAPSED TIME
 CONC. % 00:00 04:00 24:00 48:00 72:00 96:00

Control	pH	7.6					8.4
	O2 ppm	7.4					8.5
	Cond.	555					565
	Temp(C)	15.5	15.0	15.0	15.0	15.0	15.5
10	pH	7.8					8.4
	O2 ppm	8.3					8.9
	Cond.	532					536
	Temp(C)	15.5	15.0	15.0	15.0	15.0	15.5
20	pH	7.9					8.3
	O2 ppm	8.6					8.7
	Cond.	503					510
	Temp(C)	15.5	15.0	15.0	15.0	15.0	15.5
40	pH	7.7					8.3
	O2 ppm	8.0					8.9
	Cond.	443					449
	Temp(C)	15.5	15.0	15.0	15.0	15.0	15.5
65	pH	7.9					8.2
	O2 ppm	8.5					8.9
	Cond.	365					374
	Temp(C)	15.5	15.0	15.0	15.0	15.0	15.5
100	pH	8.0					7.9
	O2 ppm	8.7					8.7
	Cond.	252					261
	Temp(C)	15.5	15.0	15.0	15.0	15.0	15.5

TOXICITY TEST REPORT

Sample: 03890262

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : OT cooling water, (1000)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Rankin
 Date Collected : 11/13/89
 Received : 11/14/89
 Tested : 11/15/89 at: 1030
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
 LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03890262

TEST CONC. %	ELAPSED TIME					
	00:00	04:00	24:00	48:00	72:00	96:00
Control	pH 7.7 O2 ppm 7.9 Cond. 566 Temp(C) 15.0	15.0	15.0	15.0	14.0	14.0
10	pH 7.7 O2 ppm 8.1 Cond. 539 Temp(C) 15.0	15.0	15.0	14.0	14.0	14.0
20	pH 7.8 O2 ppm 8.6 Cond. 507 Temp(C) 15.0	15.0	15.0	14.0	14.0	14.0
40	pH 7.9 O2 ppm 9.5 Cond. 444 Temp(C) 15.0	15.0	15.0	14.0	14.0	14.0
65	pH 8.1 O2 ppm 9.8 Cond. 365 Temp(C) 15.0	15.0	15.0	14.0	14.0	14.0
100	pH 8.3 O2 ppm 9.9 Cond. 255 Temp(C) 15.0	15.0	15.0	14.0	14.0	14.0

MISA Trout

SLOPE of Mortality Curve :
LC50 Calculated By : Intuitive

TOXICITY TEST REPORT

Sample: 03900017

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical
Control point : OT cooling water, (1000)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. McLaughlin
Date Collected : 01/09/90
Received : 01/10/90
Tested : 01/11/90 at: 1100
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	11:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments : Non-lethal

TOXICITY TEST PARAMETERS

Sample Number: 03900017

TEST CONC.	ELAPSED TIME				
%	11:00	24:00	48:00	72:00	96:00
100	pH 8.0				8.1
	O2 ppm 10.4				9.6
	Cond. 274				284
	Temp(C) 15.0	14.0	15.0	15.0	15.0
Control	pH 7.9				8.5
	O2 ppm 9.1				9.7
	Cond. 563				559
	Temp(C) 15.0	14.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 01900035

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : OT cooling water, (1000)
 Laboratory : MOE
 Sampling Method : Grab
 Sampled By : D. Hamilton
 Date Collected : 03/12/90
 Received : 03/13/90
 Tested : 03/16/90 at: 1130
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME							TOTAL MORTALITY
%	00:00	01:10	01:00	23:00	51:00	71:00	96:00	%
100	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01900035

TEST CONC. %	ELAPSED TIME						
	00:00	01:10	01:00	23:00	51:00	71:00	96:00
100	pH	7.6		7.8	7.8	7.7	7.7
	O2 ppm	9.8		10.5	10.6	10.3	10.2
	Cond.	190		200	195	191	195
	Temp(C)	15.0		15.0	15.0	15.0	15.0
65	pH			7.9	7.9	7.8	7.9
	O2 ppm			10.6	10.8	10.4	10.4
	Cond.			240	235	235	240
	Temp(C)			15.0	15.0	15.0	15.0
40	pH			7.9	7.9	7.8	7.9
	O2 ppm			10.7	10.8	10.4	10.4
	Cond.			225	220	220	220
	Temp(C)			15.0	15.0	15.0	15.0
30	pH			7.8	7.8	7.8	7.9
	O2 ppm			10.5	10.8	10.4	10.3
	Cond.			255	250	250	255
	Temp(C)			15.0	15.0	15.0	15.0
20	pH			7.7	7.8	7.6	7.8
	O2 ppm			10.4	10.6	10.1	10.0
	Cond.			250	245	245	250
	Temp(C)			15.0	15.0	15.0	15.0
10	pH			7.7	7.9	7.8	7.8
	O2 ppm			10.5	10.9	10.3	10.3
	Cond.			270	270	265	275
	Temp(C)			15.0	15.0	15.0	15.0
Control	pH			7.5	7.9	7.7	7.9
	O2 ppm			10.4	10.6	10.4	10.3
	Cond.			260	240	255	265
	Temp(C)			15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 03900215

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical
Control point : OT cooling water, (1000)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. McLaughlin
Date Collected : 03/19/90
Received : 03/20/90
Tested : 03/20/90 at: 1630
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test; non-lethal

TOXICITY TEST PARAMETERS

Sample Number: 03900215

TEST CONC. %	ELAPSED TIME				
	00:00	24:00	48:00	72:00	96:00
100	pH 8.0				8.0
	O2 ppm 10.0				10.4
	Cond. 952				974
	Temp(C) 15.0	14.0	15.0	14.5	14.0
100	pH 8.0				8.0
	O2 ppm 10.0				10.4
	Cond. 952				974
	Temp(C) 15.0	14.0	15.0	14.5	14.0
Control	pH 7.9				8.5
	O2 ppm 8.3				10.4
	Cond. 545				535
	Temp(C) 15.0	14.0	15.0	14.5	14.0
Control	pH 7.9				8.4
	O2 ppm 8.3				10.1
	Cond. 545				543
	Temp(C) 15.0	14.0	15.0	14.5	14.0

TOXICITY TEST REPORT

Sample: 03890274

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : process effluent, (2100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Rankin
 Date Collected : 11/16/89
 Received : 11/17/89
 Tested : 11/18/89 at: 1230
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
 LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03890274

TEST CONC. %	ELAPSED TIME					
	00:00	04:00	24:00	48:00	72:00	96:00

Control	pH	7.9					8.6
	O2 ppm	8.6					9.9
	Cond.	558					530
	Temp(C)	15.0	15.0	14.0	15.0	14.0	14.0
10	pH	7.8					8.6
	O2 ppm	8.9					9.9
	Cond.	1263					1236
	Temp(C)	15.0	15.0	14.0	15.0	14.0	14.0
20	pH	7.8					8.6
	O2 ppm	8.8					9.8
	Cond.	1960					1914
	Temp(C)	15.0	15.0	14.0	15.0	14.0	14.0
40	pH	7.8					8.5
	O2 ppm	8.7					9.8
	Cond.	3400					3360
	Temp(C)	15.0	15.0	14.0	15.0	14.0	14.0
65	pH	7.7					8.4
	O2 ppm	8.5					9.8
	Cond.	5040					4950
	Temp(C)	15.0	15.0	14.0	15.0	14.0	14.0
100	pH	7.6					8.2
	O2 ppm	8.4					9.6
	Cond.	7330					7250
	Temp(C)	15.0	15.0	14.0	15.0	14.0	14.0

MISA Trout

SLOPE of Mortality Curve :
LC50 Calculated By : Intuitive

TOXICITY TEST REPORT

Sample: 03890357

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical
Control point : process effluent, (2100)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. McLaughlin
Date Collected : 12/13/89
Received : 12/14/89
Tested : 12/17/89 at: 900
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	4	4	4	40
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100%

TOXICITY TEST PARAMETERS

Sample Number: 03890357

TEST CONC. %	E L A P S E D T I M E				
	00:00	24:00	48:00	72:00	96:00
100	pH 7.0				7.8
	O2 ppm 7.0				7.0
	Cond. 1198				1245
	Temp(C) 15.0	14.0	14.0	14.0	14.0
65	pH 7.4				8.0
	O2 ppm 7.3				8.5
	Cond. 8220				8560
	Temp(C) 15.0	14.0	14.0	14.0	14.0
40	pH 7.6				8.1
	O2 ppm 7.6				8.8
	Cond. 5250				5460
	Temp(C) 15.0	14.0	14.0	14.0	14.0
20	pH 7.7				8.3
	O2 ppm 7.6				9.7
	Cond. 3010				3100
	Temp(C) 15.0	14.0	14.0	14.0	14.0
10	pH 7.7				8.3
	O2 ppm 7.6				9.8
	Cond. 1851				1874
	Temp(C) 15.0	14.0	14.0	14.0	14.0
5	pH 7.9				8.4
	O2 ppm 7.6				9.5
	Cond. 1162				1207
	Temp(C) 15.0	14.0	14.0	14.0	14.0
Control	pH 7.8				8.4
	O2 ppm 8.7				9.3
	Cond. 561				557
	Temp(C) 15.0	14.0	14.0	14.0	14.0

TOXICITY TEST REPORT

Sample: 03900011

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical
Control point : process effluent, (2100)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. McLaughlin
Date Collected : 01/09/90
Received : 01/10/90
Tested : 01/11/90 at: 1100
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY	
	%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

TOXICITY TEST PARAMETERS

Sample Number: 03900011

TEST CONC.	ELAPSED TIME				
	%	00:00	24:00	48:00	72:00

100	pH	8.4				8.1
	O2 ppm	7.4				9.0
	Cond.	4150				4170
	Temp(C)	15.0	14.0	15.0	15.0	15.0
65	pH	8.3				8.3
	O2 ppm	7.7				9.3
	Cond.	2970				2980
	Temp(C)	15.0	14.0	15.0	15.0	15.0
40	pH	8.3				8.3
	O2 ppm	8.0				9.4
	Cond.	2060				2060
	Temp(C)	15.0	14.0	15.0	15.0	15.0
20	pH	8.2				8.3
	O2 ppm	8.6				9.1
	Cond.	1305				1307
	Temp(C)	15.0	14.0	15.0	15.0	15.0
10	pH	8.2				8.3
	O2 ppm	8.5				9.3
	Cond.	933				934
	Temp(C)	15.0	14.0	15.0	15.0	15.0
5	pH	8.2				8.5
	O2 ppm	8.4				9.7
	Cond.	735				735
	Temp(C)	15.0	14.0	15.0	15.0	15.0
Control	pH	8.1				8.4
	O2 ppm	8.2				9.5
	Cond.	565				564
	Temp(C)	15.0	14.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 03900116

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : process effluent, (2100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. McLaughlin
 Date Collected : 02/13/90
 Received : 02/14/90
 Tested : 02/14/90 at: 1600
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
	%	00:00	24:00	48:00	72:00	96:00
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
 LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03900116

TEST CONC. %	E L A P S E D T I M E					
		00:00	24:00	48:00	72:00	96:00
100	pH	8.3				8.1
	O2 ppm	7.1				9.5
	Cond.	3580				3620
	Temp(C)	15.0	15.0	14.0	14.0	14.0
65	pH	8.1				8.3
	O2 ppm	7.8				9.6
	Cond.	2570				2560
	Temp(C)	15.0	15.0	14.0	14.0	14.0
40	pH	8.0				8.4
	O2 ppm	8.4				9.2
	Cond.	1824				1797
	Temp(C)	15.0	15.0	14.0	14.0	14.0
20	pH	8.0				8.4
	O2 ppm	8.9				8.2
	Cond.	1187				1166
	Temp(C)	15.0	15.0	14.0	14.0	14.0
10	pH	8.0				8.5
	O2 ppm	9.2				9.5
	Cond.	867				849
	Temp(C)	15.0	15.0	14.0	14.0	14.0
5	pH	8.0				8.3
	O2 ppm	9.3				8.9
	Cond.	715				689
	Temp(C)	15.0	15.0	14.0	14.0	14.0
Control	pH	7.9				8.5
	O2 ppm	9.2				9.0
	Cond.	551				527
	Temp(C)	15.0	15.0	14.0	14.0	14.0

TOXICITY TEST REPORT

Sample: 01900034

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical
Control point : process effluent, (2100)
Laboratory : MOE
Sampling Method : Grab
Sampled By : D. Hamilton
Date Collected : 03/14/90
Received : 03/13/90
Tested : 03/16/90 at: 1200
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME								TOTAL MORTALITY
%	00:00	00:30	01:00	02:00	22:30	50:00	70:00	96:00	%
100	0	0	0	0	0	0	0	1	10
65	0	0	0	0	0	0	0	1	10
40	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01900034

TEST CONC. %	ELAPSED TIME							
	00:00	00:30	01:00	02:00	22:30	50:00	70:00	96:00
100	pH 7.6			7.6	7.9	8.0	8.0	8.1
	O2 ppm 8.9			9.0	10.1	10.3	9.8	9.8
	Cond. 2400			2350	2300	2400	2380	2400
	Temp(C) 15.0			15.0	15.0	15.0	15.0	15.0
65	pH 7.7			7.7	7.9	8.0	8.0	8.1
	O2 ppm 9.2			9.2	10.2	10.4	10.2	10.0
	Cond. 1650			1650	1600	1650	1650	1700
	Temp(C) 15.0			15.0	15.0	15.0	15.0	15.0
40	pH 7.8			7.8	7.9	7.9	8.0	8.0
	O2 ppm 9.3			9.3	10.3	10.4	10.1	10.0
	Cond. 1150			1150	1130	1170	1140	1160
	Temp(C) 15.0			15.0	15.0	15.0	15.0	15.0
30	pH 7.8			7.8	7.9	7.9	7.9	8.0
	O2 ppm 9.6			9.6	10.4	10.5	10.0	10.0
	Cond. 975			975	910	940	920	940
	Temp(C) 15.0			15.0	15.0	15.0	15.0	15.0
20	pH 7.9			7.9	7.9	7.9	7.9	8.0
	O2 ppm 9.7			9.7	10.3	10.6	10.1	10.0
	Cond. 750			750	730	700	720	740
	Temp(C) 15.0			15.0	15.0	15.0	15.0	15.0
10	pH 7.8			7.8	7.8	7.8	7.9	7.9
	O2 ppm 9.8			9.8	10.3	10.5	10.2	10.1
	Cond. 600			600	570	550	560	580
	Temp(C) 15.0			15.0	15.0	15.0	15.0	15.0
Control	pH 7.8			7.8	7.7	7.7	7.7	7.9
	O2 ppm 9.8			9.8	10.3	10.6	10.3	10.3
	Cond. 275			275	260	250	270	285
	Temp(C) 15.0			15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 03900216

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical
Control point : process effluent, (2100)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. McLaughlin
Date Collected : 03/19/90
Received : 03/20/90
Tested : 03/20/90 at: 1620
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY	
	%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03900216

TEST CONC.	ELAPSED TIME				
	%	00:00	24:00	48:00	72:00

100	pH	7.7				7.8
	O2 ppm	7.0				9.6
	Cond.	3410				3420
	Temp(C)	15.0	14.0	15.0	14.5	14.0
65	pH	7.7				8.0
	O2 ppm	7.5				10.1
	Cond.	2410				2430
	Temp(C)	15.0	14.0	15.0	14.5	14.0
40	pH	7.8				8.0
	O2 ppm	8.2				9.7
	Cond.	1659				1709
	Temp(C)	15.0	14.0	15.0	14.5	14.0
20	pH	7.8				8.2
	O2 ppm	8.3				9.9
	Cond.	1134				1142
	Temp(C)	15.0	14.0	15.0	14.5	14.0
10	pH	7.9				8.2
	O2 ppm	8.6				9.9
	Cond.	830				830
	Temp(C)	15.0	14.0	15.0	14.5	14.0
5	pH	7.9				8.2
	O2 ppm	8.6				10.0
	Cond.	684				694
	Temp(C)	15.0	14.0	15.0	14.5	14.0
Control	pH	7.9				8.4
	O2 ppm	8.6				10.2
	Cond.	548				545
	Temp(C)	15.0	14.0	15.0	14.5	14.0

COMPANY: Dow Chemical Canada Inc., Sarnia
(910109)
SECTOR: Organic Chemical
REGION: Southwest

SUMMARY

Data for forty-three *Daphnia magna* acute lethality toxicity tests conducted on samples of effluent collected between October 1989 and March 1990 were submitted by Dow Chemical Canada Inc. of Sarnia. Overall, the samples tested for Dow Chemical had little or no acute toxicity to *Daphnia*. In all test results submitted there were never more than three neonates dead in any one concentration of effluent and in most cases less than two animals died during the test.

Four of eight samples from once through cooling water outfalls #300 and 1000 were not acutely lethal to *Daphnia*. The remaining four samples had LC50s > 100%.

Five samples from process effluent #2100 were tested for toxicity to *Daphnia*. Three of these were not acutely lethal to *Daphnia* and the remaining two had 48 h LC50s > 100%.

Samples from the combined effluent outfalls (#200, 500, 600, 700, and 900) were rarely acutely toxic to *Daphnia*. Seventy-seven percent of the samples were nonlethal. The remaining seven samples had LC50s > 100%. Outfalls #200, 700, and 900 were toxic during the January sampling period, and outfalls #200 and 500 were toxic during the October sampling period.

In March, audit tests were conducted by Ministry Scientists on samples from all outfalls being examined at Dow Chemical. Once through cooling water #1000 was not acutely lethal to *Daphnia*, and OTCW #300 had an LC50 > 100%. Samples of combined effluent from outfalls #200, 500 and 900 were nonlethal, and only one neonate died in each of the tests with effluents from outfalls #600 and 700.

intake water

combined effluent

03890206 sampled: 10/10/89 non-lethal
95% fid. limits: 100.0 - 100.0 %
comments: Non-lethal

03890256 sampled: 11/13/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

Dow Chemical Canada Inc. (continued)

03890359 sampled: 12/13/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900018 sampled: 01/09/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900111 sampled: 02/13/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

02900028 sampled: 03/04/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

03900209 sampled: 03/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

OT cooling water

03890203 sampled: 10/10/89 non-lethal
95% fid. limits: 100.0 - 100.0 %
comments: Non-lethal

03890261 sampled: 11/13/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900016 sampled: 01/09/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

02900027 sampled: 03/04/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

03900210 sampled: 03/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test: Non lethal

combined effluent

03890207 sampled: 10/10/89 non-lethal
95% fid. limits: 100.0 - 100.0 %
comments: 16.7% mortality @ 6%

03890257 sampled: 11/13/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

Dow Chemical Canada Inc. (continued)

03890360 sampled: 12/13/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900015 sampled: 01/09/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900112 sampled: 02/13/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

02900029 sampled: 03/04/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

03900211 sampled: 03/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

combined effluent

03890209 sampled: 10/10/89 non-lethal
95% fid. limits: 100.0 - 100.0 %
comments: Non-lethal

03890258 sampled: 11/13/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03890356 sampled: 12/13/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100%.

03900013 sampled: 01/09/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900113 sampled: 02/13/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

02900031 sampled: 03/05/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

03900212 sampled: 03/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

Dow Chemical Canada Inc. (continued)

combined effluent

03890205 sampled: 10/10/89 non-lethal
95% fid. limits: 100.0 - 100.0 %
comments: Non-lethal

03890259 sampled: 11/13/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03890358 sampled: 12/13/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900014 sampled: 01/09/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900114 sampled: 02/13/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

02900030 sampled: 03/05/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

03900213 sampled: 03/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

combined effluent

03890202 sampled: 10/10/89 non-lethal
95% fid. limits: 100.0 - 100.0 %
comments: Non-lethal.

03890260 sampled: 11/13/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03890361 sampled: 12/13/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900012 sampled: 01/09/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900115 sampled: 02/13/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

Dow Chemical Canada Inc. (continued)

02900032 sampled: 03/05/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit/high conductivity

03900214 sampled: 03/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

OT cooling water

03890204 sampled: 10/10/89 non-lethal
95% fid. limits: 100.0 - 100.0 %
comments: 16.7% mortality @ 13%

03890262 sampled: 11/13/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100%

03900017 sampled: 01/09/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

02900035 sampled: 03/12/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

03900215 sampled: 03/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

intake water

process effluent

process effluent

process effluent

process effluent

process effluent

process effluent

process effluent

Dow Chemical Canada Inc. (continued)

process effluent

process effluent

03890274 sampled: 11/16/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03890357 sampled: 12/13/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50>100

03900011 sampled: 01/09/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900116 sampled: 02/13/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

02900034 sampled: 03/12/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit/high conductivity, low D. O.

03900216 sampled: 03/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

waste site

total plant

steam plant

north pump house

south pump house

rain gauge

TOXICITY TEST REPORT

Sample: 03890206

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (200)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Rankin
 Date Collected : 10/10/89
 Received : 10/11/89
 Tested : 10/11/89 at: 1730

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E				TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	%
Control	0	0	0	0	0
6	0	0	0	0	0
13	0	0	0	0	0
25	0	0	0	1	8
50	0	0	0	1	8
100	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 100.0 - 100.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By : INTUITIVE

TOXICITY TEST PARAMETERS

Sample Number: 03890206

TEST CONC. %	E L A P S E D T I M E			
	00:00	04:00	24:00	48:00

Control	pH	8.4			8.2
	O2 ppm	8.8			9.3
	Cond.	301			304
	Temp(C)	20.0	20.0	20.0	20.0
6	pH	8.4			8.3
	O2 ppm	8.7			9.4
	Cond.	294			309
	Temp(C)	20.0	20.0	20.0	20.0
13	pH	8.4			8.3
	O2 ppm	8.6			9.0
	Cond.	288			294
	Temp(C)	20.0	20.0	20.0	20.0
25	pH	8.3			8.3
	O2 ppm	8.6			8.9
	Cond.	282			287
	Temp(C)	20.0	20.0	20.0	20.0
50	pH	8.3			8.2
	O2 ppm	8.7			8.8
	Cond.	267			274
	Temp(C)	20.0	20.0	20.0	20.0
100	pH	8.2			8.1
	O2 ppm	8.7			8.6
	Cond.	237			244
	Temp(C)	20.0	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 03890256

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (200)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Rankin
 Date Collected : 11/13/89
 Received : 11/14/89
 Tested : 11/14/89 at: 1510
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E				TOTAL MORTALITY	
	%	00:00	04:00	24:00	48:00	%
Control	0	0	0	0		0
6	0	0	0	0		0
13	0	0	0	0		0
25	0	0	0	0		0
50	0	0	0	0		0
100	0	0	0	0		0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03890256

TEST CONC.	ELAPSED TIME			
%	00:00	04:00	24:00	48:00

Control	pH	8.2			8.1
	O2 ppm	8.7			8.7
	Cond.	292			301
	Temp(C)	20.5	20.5	20.0	19.0
6	pH	8.2			8.2
	O2 ppm	8.8			8.6
	Cond.	291			297
	Temp(C)	20.5	20.5	20.0	19.0
13	pH	8.2			8.2
	O2 ppm	8.8			8.4
	Cond.	287			292
	Temp(C)	20.5	20.5	20.0	19.0
25	pH	8.2			8.1
	O2 ppm	8.9			8.3
	Cond.	280			285
	Temp(C)	20.5	20.5	20.0	19.0
50	pH	8.2			8.1
	O2 ppm	8.9			8.3
	Cond.	263			271
	Temp(C)	20.5	20.5	20.0	19.0
100	pH	8.2			8.1
	O2 ppm	9.1			8.0
	Cond.	231			238
	Temp(C)	20.5	20.5	20.0	19.0

TOXICITY TEST REPORT

Sample: 03890359

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (200)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. McLaughlin
 Date Collected : 12/13/89
 Received : 12/14/89
 Tested : 12/15/89 at: 1225
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00 48:00	
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03890359

TEST CONC.	ELAPSED TIME		
	%	00:00	24:00 48:00

100	pH	8.3	8.2
	O2 ppm	9.4	8.5
	Cond.	238	248
	Temp(C)	19.5	19.0
50	pH	8.4	8.3
	O2 ppm	9.0	8.4
	Cond.	269	275
	Temp(C)	19.5	19.0
25	pH	8.4	8.4
	O2 ppm	8.8	8.4
	Cond.	283	289
	Temp(C)	19.5	19.0
13	pH	8.4	8.4
	O2 ppm	8.7	8.4
	Cond.	290	295
	Temp(C)	19.5	19.0
6	pH	8.5	8.4
	O2 ppm	8.8	8.3
	Cond.	295	300
	Temp(C)	19.5	19.0
Control	pH	8.5	8.4
	O2 ppm	8.8	8.3
	Cond.	298	298
	Temp(C)	19.5	19.0

TOXICITY TEST REPORT

Sample: 03900018

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical

Control point : combined effluent, (200)

Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. McLaughlin
 Date Collected : 01/09/90
 Received : 01/10/90
 Tested : 01/10/90 at: 1700

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E			TOTAL MORTALITY	
	%	00:00	24:00	48:00	%
100	0	0	0		0
50	0	0	0		0
25	0	0	1		8
13	0	0	0		0
6	0	0	0		0
Control	0	0	0		0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
 LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03900018

TEST CONC.	E L A P S E D T I M E		
	%	00:00	24:00

100	pH	8.1		8.1
	O2 ppm	10.1		8.6
	Cond.	233		236
	Temp(C)	20.0	19.5	20.0
50	pH	8.1		8.2
	O2 ppm	9.4		8.7
	Cond.	270		274
	Temp(C)	20.0	19.5	20.0
25	pH	8.1		8.3
	O2 ppm	9.2		8.6
	Cond.	285		290
	Temp(C)	20.0	19.5	20.0
13	pH	8.2		8.3
	O2 ppm	9.0		8.6
	Cond.	295		297
	Temp(C)	20.0	19.5	20.0
6	pH	8.2		8.3
	O2 ppm	8.8		8.5
	Cond.	297		303
	Temp(C)	20.0	19.5	20.0
Control	pH	8.2		8.3
	O2 ppm	8.9		8.7
	Cond.	301		310
	Temp(C)	20.0	19.5	20.0

TOXICITY TEST REPORT

Sample: 03900111

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (200)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. McLaughlin
 Date Collected : 02/13/90
 Received : 02/14/90
 Tested : 02/14/90 at: 1415
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03900111

TEST CONC.	ELAPSED TIME		
%	00:00	24:00	48:00

100	pH	8.1	8.2
	O2 ppm	9.1	8.6
	Cond.	231	231
	Temp(C)	20.5	20.0
50	pH	8.2	8.3
	O2 ppm	9.0	8.5
	Cond.	261	264
	Temp(C)	20.5	20.0
25	pH	8.3	8.4
	O2 ppm	9.0	8.5
	Cond.	277	279
	Temp(C)	20.5	20.0
13	pH	8.3	8.4
	O2 ppm	8.9	8.4
	Cond.	283	287
	Temp(C)	20.5	20.0
6	pH	8.3	8.4
	O2 ppm	9.0	8.4
	Cond.	289	293
	Temp(C)	20.5	20.0
Control	pH	8.3	8.4
	O2 ppm	8.9	8.4
	Cond.	293	305
	Temp(C)	20.5	20.0

TOXICITY TEST REPORT

Sample: 02900028

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical

Control point : combined effluent, (200)

Laboratory : MOE
 Sampling Method : Grab
 Sampled By : D. Hamilton
 Date Collected : 03/04/90
 Received : 03/06/90
 Tested : 03/06/90 at: 1429

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	01:00	24:00	48:00	%
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
15	0	0	0	0	0
5	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
 LC50 Calculated By : None

TOXICITY TEST PARAMETERS

Sample Number: 02900028

TEST CONC. %	ELAPSED TIME			
	00:00	01:00	24:00	48:00
100	pH 7.7			7.8
	O2 ppm 10.0			7.8
	Cond. 214			214
	Temp(C) 20.0	20.0	20.0	20.0
60	pH 7.8			7.8
	O2 ppm 9.5			7.8
	Cond. 262			267
	Temp(C) 20.0	20.0	20.0	20.0
30	pH 7.9			7.9
	O2 ppm 9.3			8.0
	Cond. 296			300
	Temp(C) 20.0	20.0	20.0	20.0
15	pH 7.9			7.9
	O2 ppm 9.2			8.0
	Cond. 315			319
	Temp(C) 20.0	20.0	20.0	20.0
5	pH 7.9			7.8
	O2 ppm 9.2			7.9
	Cond. 328			334
	Temp(C) 20.0	20.0	20.0	20.0
Control	pH 7.9			7.9
	O2 ppm 9.2			7.9
	Cond. 329			334
	Temp(C) 20.0	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 03900209

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (200)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. McLaughlin
Date Collected : 03/19/90
Received : 03/20/90
Tested : 03/21/90 at: 1045
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By : intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03900209

TEST CONC.	ELAPSED TIME		
%	00:00	24:00	48:00

100	pH	8.0	8.2
	O2 ppm	9.2	8.2
	Cond.	233	237
	Temp(C)	20.5	20.0
50	pH	8.2	8.2
	O2 ppm	9.0	8.1
	Cond.	267	287
	Temp(C)	20.5	20.0
25	pH	8.3	8.2
	O2 ppm	9.0	8.2
	Cond.	285	290
	Temp(C)	20.5	20.0
13	pH	8.3	8.2
	O2 ppm	8.9	8.1
	Cond.	293	300
	Temp(C)	20.5	20.0
6	pH	8.3	8.2
	O2 ppm	8.8	8.1
	Cond.	299	302
	Temp(C)	20.5	20.0
Control	pH	8.3	8.2
	O2 ppm	8.5	8.2
	Cond.	302	300
	Temp(C)	20.5	20.0

TOXICITY TEST REPORT

Sample: 03890203

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : OT cooling water, (300)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Rankin
 Date Collected : 10/10/89
 Received : 10/11/89
 Tested : 10/11/89 at: 1600
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E				TOTAL MORTALITY
	%	00:00	04:00	24:00	48:00
Control	0	0	0	0	0
6	0	0	0	0	0
13	0	0	0	0	0
25	0	0	0	1	8
50	0	0	0	1	8
100	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 100.0 - 100.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By : INTUITIVE

TOXICITY TEST PARAMETERS

Sample Number: 03890203

TEST CONC. %	E L A P S E D T I M E			
	00:00	04:00	24:00	48:00

Control	pH	8.4			8.3
	O2 ppm	8.8			8.4
	Cond.	301			294
	Temp(C)	20.0	20.0	20.0	20.0
6	pH	8.4			8.3
	O2 ppm	8.6			8.4
	Cond.	295			297
	Temp(C)	20.0	20.0	20.0	20.0
13	pH	8.4			8.3
	O2 ppm	8.6			8.4
	Cond.	291			292
	Temp(C)	20.0	20.0	20.0	20.0
25	pH	8.4			8.2
	O2 ppm	8.7			8.5
	Cond.	282			285
	Temp(C)	20.0	20.0	20.0	20.0
50	pH	8.4			8.2
	O2 ppm	8.7			8.4
	Cond.	265			270
	Temp(C)	20.0	20.0	20.0	20.0
100	pH	8.2			8.0
	O2 ppm	8.9			8.4
	Cond.	233			240
	Temp(C)	20.0	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 03890261

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : OT cooling water, (300)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Rankin
 Date Collected : 11/13/89
 Received : 11/14/89
 Tested : 11/14/89 at: 1620
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY	
	%	00:00	04:00	24:00	48:00	%
Control	0	0	0	0		0
6	0	0	0	0		0
13	0	0	0	0		0
25	0	0	0	0		0
50	0	0	0	0		0
100	0	0	0	0		0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

 SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890261

TEST CONC.	ELAPSED TIME			
	%	00:00	04:00	24:00

Control	pH	8.2			8.1
	O2 ppm	8.7			8.5
	Cond.	292			290
	Temp(C)	20.5	20.0	20.0	19.0
6	pH	8.2			8.1
	O2 ppm	8.8			8.4
	Cond.	287			288
	Temp(C)	20.5	20.0	20.0	19.0
13	pH	8.2			8.1
	O2 ppm	8.8			8.5
	Cond.	281			283
	Temp(C)	20.5	20.0	20.0	19.0
25	pH	8.1			8.1
	O2 ppm	8.9			8.5
	Cond.	275			277
	Temp(C)	20.5	20.0	20.0	19.0
50	pH	8.1			8.0
	O2 ppm	8.9			8.5
	Cond.	259			261
	Temp(C)	20.5	20.0	20.0	19.0
100	pH	8.0			7.9
	O2 ppm	9.1			8.6
	Cond.	236			240
	Temp(C)	20.5	20.0	20.0	19.0

TOXICITY TEST REPORT

Sample: 03900016

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical

Control point : OT cooling water, (300)

Laboratory : BAR
 Sampling Method : OT Cooling water
 Sampled By : D. McLaughlin
 Date Collected : 01/09/90
 Received : 01/10/90
 Tested : 01/10/90 at: 1625

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	1	1	4
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
 LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03900016

TEST CONC.	ELAPSED TIME		
%	00:00	24:00	48:00

100	pH	8.0	8.1
	O2 ppm	10.8	8.5
	Cond.	236	238
	Temp(C)	20.0	19.5
Control	pH	8.3	8.4
	O2 ppm	8.8	8.7
	Cond.	305	307
	Temp(C)	20.0	19.5

TOXICITY TEST REPORT

Sample: 02900027

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : OT cooling water, (300)
 Laboratory : MOE
 Sampling Method : Grab
 Sampled By : D. Hamilton
 Date Collected : 03/04/90
 Received : 03/06/90
 Tested : 03/06/90 at: 1428

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	01:00	24:00	48:00	%
100	0	0	0	1	8
60	0	0	1	1	8
30	0	0	0	0	0
15	0	0	0	0	0
5	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
 LC50 Calculated By : None

TOXICITY TEST PARAMETERS

Sample Number: 02900027

TEST CONC. %	ELAPSED TIME			
	00:00	01:00	24:00	48:00
100	pH 7.6			7.9
	02 ppm 10.0			8.2
	Cond. 209			218
	Temp(C) 20.0	20.0	20.0	20.0
60	pH 7.8			7.9
	02 ppm 9.3			8.3
	Cond. 266			271
	Temp(C) 20.0	20.0	20.0	20.0
30	pH 7.8			8.0
	02 ppm 9.1			8.3
	Cond. 300			308
	Temp(C) 20.0	20.0	20.0	20.0
15	pH 7.8			7.9
	02 ppm 9.2			8.5
	Cond. 317			324
	Temp(C) 20.0	20.0	20.0	20.0
5	pH 7.8			7.9
	02 ppm 9.2			8.5
	Cond. 330			337
	Temp(C) 20.0	20.0	20.0	20.0
Control	pH 7.6			7.9
	02 ppm 9.2			8.5
	Cond. 333			343
	Temp(C) 20.0	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 03900210

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical

Control point : OT cooling water, (300)

Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. McLaughlin
 Date Collected : 03/19/90
 Received : 03/20/90
 Tested : 03/20/90 at: 1700

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
100	0	0	0	0
Control	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test: Non lethal

SLOPE of Mortality Curve :
 LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03900210

TEST CONC.	ELAPSED TIME			
%		00:00	24:00	48:00
100	pH	8.1		8.0
	O2 ppm	9.3		8.6
	Cond.	231		231
	Temp(C)	21.0	20.0	20.0
100	pH	8.1		8.0
	O2 ppm	9.3		8.7
	Cond.	231		229
	Temp(C)	21.0	20.0	20.0
Control	pH	8.5		8.2
	O2 ppm	8.6		8.5
	Cond.	299		297
	Temp(C)	21.0	20.0	20.0
Control	pH	8.5		8.3
	O2 ppm	8.6		8.6
	Cond.	299		301
	Temp(C)	21.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 03890207

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (500)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Rankin
 Date Collected : 10/10/89
 Received : 10/11/89
 Tested : 10/11/89 at: 1720
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY %
	%	00:00	04:00	24:00	48:00
Control	0	0	0	0	0
6	0	0	0	2	16
13	0	0	0	0	0
25	0	0	0	1	8
50	0	0	0	0	0
100	0	0	0	0	0

48 Hour LC50 : Non-lethal
 95% fid. limits : 100.0 - 100.0 %
 Comments : 16.7% mortality @ 6%

SLOPE of Mortality Curve :
 LC50 Calculated By : INTUITIVE

TOXICITY TEST PARAMETERS

Sample Number: 03890207

TEST CONC.	ELAPSED TIME			
	%	00:00	04:00	24:00

Control	pH	8.4			8.3
	O2 ppm	8.8			8.6
	Cond.	301			289
	Temp(C)	20.0	20.0	20.0	20.0
6	pH	8.5			8.3
	O2 ppm	8.6			8.7
	Cond.	328			325
	Temp(C)	20.0	20.0	20.0	20.0
13	pH	8.4			8.2
	O2 ppm	8.6			8.7
	Cond.	356			350
	Temp(C)	20.0	20.0	20.0	20.0
25	pH	8.4			8.3
	O2 ppm	8.6			8.8
	Cond.	402			397
	Temp(C)	20.0	20.0	20.0	20.0
50	pH	8.4			8.2
	O2 ppm	8.6			8.6
	Cond.	501			496
	Temp(C)	20.0	20.0	20.0	20.0
100	pH	8.3			8.1
	O2 ppm	8.7			8.5
	Cond.	702			692
	Temp(C)	20.0	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 03890257

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (500)
Laboratory : BAR
Sampling Method : Grab
Sampled By : M. Rankin
Date Collected : 11/13/89
Received : 11/14/89
Tested : 11/14/89 at: 1545
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	%
Control	0	0	0	1	8
6	0	0	0	0	0
13	0	0	0	0	0
25	0	0	0	0	0
50	0	0	0	0	0
100	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03890257

TEST CONC. %	ELAPSED TIME			
	00:00	04:00	24:00	48:00

Control	pH	8.2			8.1
	O2 ppm	8.7			8.6
	Cond.	292			288
	Temp(C)	20.5	20.5	20.0	19.0
6	pH	8.2			8.1
	O2 ppm	8.8			8.5
	Cond.	315			311
	Temp(C)	20.5	20.5	20.0	19.0
13	pH	8.2			8.0
	O2 ppm	8.8			8.6
	Cond.	346			342
	Temp(C)	20.5	20.5	20.0	19.0
25	pH	8.2			8.1
	O2 ppm	8.8			8.6
	Cond.	394			389
	Temp(C)	20.5	20.5	20.0	19.0
50	pH	8.2			8.0
	O2 ppm	8.9			8.7
	Cond.	495			493
	Temp(C)	20.5	20.5	20.0	19.0
100	pH	8.3			7.9
	O2 ppm	9.1			8.8
	Cond.	695			691
	Temp(C)	20.5	20.5	20.0	19.0

TOXICITY TEST REPORT

Sample: 03890360

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (500)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. McLaughlin
 Date Collected : 12/13/89
 Received : 12/14/89
 Tested : 12/15/89 at: 1400
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY	
	%	00:00	24:00	48:00	%
100	0	0	0		0
50	0	0	0		0
25	0	0	0		0
13	0	0	0		0
6	0	0	0		0
Control	0	0	0		0

48 Hour LC50 : Non-lethal
 95% fid. limits : 0.0 - 0.0 %
 Comments : Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03890360

TEST ELAPSED TIME
 CONC. % 00:00 24:00 48:00

100	pH	8.2	8.3	
	O2 ppm	9.2	8.5	
	Cond.	1795	1766	
	Temp(C)	19.5	19.0	19.0
50	pH	8.3	8.4	
	O2 ppm	8.8	8.6	
	Cond.	1042	1036	
	Temp(C)	19.5	19.0	19.0
25	pH	8.4	8.4	
	O2 ppm	8.8	8.6	
	Cond.	673	673	
	Temp(C)	19.5	19.0	19.0
13	pH	8.4	8.4	
	O2 ppm	8.7	8.6	
	Cond.	495	493	
	Temp(C)	19.5	19.0	19.0
6	pH	8.4	8.4	
	O2 ppm	8.8	8.6	
	Cond.	389	388	
	Temp(C)	19.5	19.0	19.0
Control	pH	8.5	8.4	
	O2 ppm	8.8	8.5	
	Cond.	298	296	
	Temp(C)	19.5	19.0	19.0

TOXICITY TEST REPORT

Sample: 03900015

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (500)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. McLaughlin
Date Collected : 01/09/90
Received : 01/10/90
Tested : 01/10/90 at: 1620
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00	48:00
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03900015

TEST CONC. %	ELAPSED TIME		
	00:00	24:00	48:00

100	pH	8.3	8.3
	O2 ppm	9.8	8.4
	Cond.	1570	1578
	Temp(C)	20.0	19.5 20.0
50	pH	8.3	8.3
	O2 ppm	9.2	8.4
	Cond.	953	944
	Temp(C)	20.0	19.5 20.0
25	pH	8.2	8.4
	O2 ppm	8.9	8.4
	Cond.	626	618
	Temp(C)	20.0	19.5 20.0
13	pH	8.3	8.3
	O2 ppm	8.8	8.4
	Cond.	466	460
	Temp(C)	20.0	19.5 20.0
6	pH	8.2	8.3
	O2 ppm	8.7	8.2
	Cond.	382	378
	Temp(C)	20.0	19.5 20.0
Control	pH	8.3	8.4
	O2 ppm	8.8	8.6
	Cond.	305	307
	Temp(C)	20.0	19.5 20.0

TOXICITY TEST REPORT

Sample: 03900112

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (500)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. McLaughlin
Date Collected : 02/13/90
Received : 02/14/90
Tested : 02/14/90 at: 1425
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E			TOTAL MORTALITY	
	%	00:00	24:00	48:00	%
100	0	0	0		0
50	0	0	0		0
25	0	0	0		0
13	0	0	0		0
6	0	0	0		0
Control	0	0	0		0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

TOXICITY TEST PARAMETERS

Sample Number: 03900112

TEST CONC. %	E L A P S E D T I M E		
	00:00	24:00	48:00

100	pH	8.2	8.3
	O2 ppm	9.1	8.6
	Cond.	1286	1291
	Temp(C)	20.5	20.0
50	pH	8.2	8.3
	O2 ppm	9.0	8.7
	Cond.	785	787
	Temp(C)	20.5	20.0
25	pH	8.3	8.4
	O2 ppm	9.0	8.7
	Cond.	549	550
	Temp(C)	20.5	20.0
13	pH	8.3	8.4
	O2 ppm	8.9	8.7
	Cond.	422	422
	Temp(C)	20.5	20.0
6	pH	8.3	8.4
	O2 ppm	8.9	8.7
	Cond.	353	355
	Temp(C)	20.5	20.0
Control	pH	8.3	8.5
	O2 ppm	8.9	8.6
	Cond.	293	297
	Temp(C)	20.5	20.0

TOXICITY TEST REPORT

Sample: 02900029

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (500)
Laboratory : MOE
Sampling Method : Grab
Sampled By : D. Hamilton
Date Collected : 03/04/90
Received : 03/06/90
Tested : 03/06/90 at: 1526
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	01:00	24:00	48:00	%
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
15	0	0	0	0	0
5	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

TOXICITY TEST PARAMETERS

Sample Number: 02900029

TEST CONC.	ELAPSED TIME			
%	00:00	01:00	24:00	48:00

100	pH	7.8			8.2
	O2 ppm	8.9			7.6
	Cond.	1152			1127
	Temp(C)	20.0	20.0	20.0	20.0
60	pH	7.8			8.1
	O2 ppm	8.9			7.6
	Cond.	831			821
	Temp(C)	20.0	20.0	20.0	20.0
30	pH	7.9			8.0
	O2 ppm	8.6			7.6
	Cond.	573			578
	Temp(C)	20.0	20.0	20.0	20.0
15	pH	7.9			8.0
	O2 ppm	8.5			7.5
	Cond.	449			460
	Temp(C)	20.0	20.0	20.0	20.0
5	pH	7.9			7.9
	O2 ppm	9.1			7.4
	Cond.	376			382
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH	7.6			7.7
	O2 ppm	9.2			7.5
	Cond.	328			338
	Temp(C)	20.0	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 03900211

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (500)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. McLaughlin
 Date Collected : 03/19/90
 Received : 03/20/90
 Tested : 03/21/90 at: 1050
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY	
	%	00:00	24:00	48:00	%
100	0	0	0	0	0
50	0	0	0	0	0
25	0	0	0	0	0
13	0	0	0	0	0
6	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
 LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03900211

TEST CONC.	ELAPSED TIME		
%	00:00	24:00	48:00

100	pH	8.1	8.1
	O2 ppm	9.0	8.5
	Cond.	329	331
	Temp(C)	20.5	20.0
50	pH	8.2	8.2
	O2 ppm	8.9	8.4
	Cond.	315	316
	Temp(C)	20.5	20.0
25	pH	8.3	8.2
	O2 ppm	8.8	8.4
	Cond.	309	310
	Temp(C)	20.5	20.0
13	pH	8.3	8.2
	O2 ppm	8.8	8.4
	Cond.	306	307
	Temp(C)	20.5	20.0
6	pH	8.3	8.2
	O2 ppm	8.8	8.4
	Cond.	303	305
	Temp(C)	20.5	20.0
Control	pH	8.3	8.2
	O2 ppm	8.5	8.3
	Cond.	302	304
	Temp(C)	20.5	20.0

TOXICITY TEST REPORT

Sample: 03890209

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (600)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Rankin
 Date Collected : 10/10/89
 Received : 10/11/89
 Tested : 10/11/89 at: 1600
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E				TOTAL MORTALITY	
	%	00:00	04:00	24:00	48:00	%
Control	0	0	0	0	0	0
6	0	0	0	0	0	0
13	0	0	0	0	0	0
25	0	0	0	0	0	0
50	0	0	0	0	0	0
100	0	0	0	0	0	0

48 Hour LC50 : Non-lethal
 95% fid. limits : 100.0 - 100.0 %
 Comments : Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By : INTUITIVE

TOXICITY TEST PARAMETERS

Sample Number: 03890209

TEST CONC. %	E L A P S E D T I M E			
	00:00	04:00	24:00	48:00

Control	pH	8.4			8.3
	O2 ppm	8.8			8.6
	Cond.	301			290
	Temp(C)	20.0	20.0	20.0	20.0
6	pH	8.4			8.3
	O2 ppm	8.8			8.8
	Cond.	294			301
	Temp(C)	20.0	20.0	20.0	20.0
13	pH	8.4			8.2
	O2 ppm	8.7			8.7
	Cond.	294			299
	Temp(C)	20.0	20.0	20.0	20.0
25	pH	8.4			8.2
	O2 ppm	8.6			8.6
	Cond.	285			287
	Temp(C)	20.0	20.0	20.0	20.0
50	pH	8.3			8.2
	O2 ppm	8.7			8.6
	Cond.	272			275
	Temp(C)	20.0	20.0	20.0	20.0
100	pH	8.1			8.0
	O2 ppm	8.9			8.5
	Cond.	244			247
	Temp(C)	20.0	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 03890258

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (600)
Laboratory : BAR
Sampling Method : Grab
Sampled By : M. Rankin
Date Collected : 11/13/89
Received : 11/14/89
Tested : 11/14/89 at: 1600
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	%
Control	0	0	0	0	0
6	0	0	0	0	0
13	0	0	0	0	0
25	0	0	0	0	0
50	0	0	0	0	0
100	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

TOXICITY TEST PARAMETERS

Sample Number: 03890258

TEST CONC. %	ELAPSED TIME			
	00:00	04:00	24:00	48:00
Control	pH 8.2			8.1
	O2 ppm 8.7			8.5
	Cond. 292			289
	Temp(C) 20.5	20.5	20.0	19.0
6	pH 8.2			8.1
	O2 ppm 8.8			8.8
	Cond. 287			293
	Temp(C) 20.5	20.5	20.0	19.0
13	pH 8.2			8.1
	O2 ppm 8.8			8.8
	Cond. 286			290
	Temp(C) 20.5	20.5	20.0	19.0
25	pH 8.2			8.1
	O2 ppm 8.8			8.7
	Cond. 278			282
	Temp(C) 20.5	20.5	20.0	19.0
50	pH 8.2			8.1
	O2 ppm 8.9			8.8
	Cond. 262			265
	Temp(C) 20.5	20.5	20.0	19.0
100	pH 8.1			8.0
	O2 ppm 9.1			8.6
	Cond. 235			239
	Temp(C) 20.5	20.5	20.0	19.0

TOXICITY TEST REPORT

Sample: 03890356

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (600)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. McLaughlin
 Date Collected : 12/13/89
 Received : 12/14/89
 Tested : 12/15/89 at: 1100
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00	
100	0	0	0	0
50	0	0	0	0
25	0	1	1	8
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100%.

SLOPE of Mortality Curve :
LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03890356

TEST CONC.	ELAPSED TIME		
%	00:00	24:00	48:00

100	pH	8.2	8.2
	O2 ppm	9.4	8.6
	Cond.	255	254
	Temp(C)	19.5	19.0
50	pH	8.4	8.3
	O2 ppm	9.1	8.6
	Cond.	277	275
	Temp(C)	19.5	19.0
25	pH	8.4	8.4
	O2 ppm	8.9	8.6
	Cond.	289	286
	Temp(C)	19.5	19.0
13	pH	8.4	8.4
	O2 ppm	8.8	8.5
	Cond.	294	291
	Temp(C)	19.5	19.0
6	pH	8.5	8.4
	O2 ppm	8.8	8.4
	Cond.	397	294
	Temp(C)	19.5	19.0
Control	pH	8.5	8.4
	O2 ppm	8.8	8.3
	Cond.	298	296
	Temp(C)	19.5	19.0

TOXICITY TEST REPORT

Sample: 03900013

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (600)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. McLaughlin
 Date Collected : 01/09/90
 Received : 01/10/90
 Tested : 01/10/90 at: 1550
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03900013

TEST CONC. %	ELAPSED TIME		
	00:00	24:00	48:00

100	pH	8.1	8.1
	O2 ppm	10.2	8.3
	Cond.	249	252
	Temp(C)	20.0	19.5
50	pH	8.2	8.3
	O2 ppm	9.4	8.4
	Cond.	278	283
	Temp(C)	20.0	19.5
25	pH	8.2	8.3
	O2 ppm	9.1	8.3
	Cond.	291	296
	Temp(C)	20.0	19.5
13	pH	8.3	8.3
	O2 ppm	8.9	8.2
	Cond.	299	302
	Temp(C)	20.0	19.5
6	pH	8.2	8.3
	O2 ppm	8.9	8.0
	Cond.	303	305
	Temp(C)	20.0	19.5
Control	pH	8.3	8.4
	O2 ppm	8.8	8.5
	Cond.	305	307
	Temp(C)	20.0	19.5

TOXICITY TEST REPORT

Sample: 03900113

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (600)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. McLaughlin
 Date Collected : 02/13/90
 Received : 02/14/90
 Tested : 02/14/90 at: 1440

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY	
	%	00:00	24:00		48:00
100	0	0	0	0	0
50	0	0	0	0	0
25	0	0	0	0	0
13	0	0	0	0	0
6	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03900113

TEST CONC. %	ELAPSED TIME		
	00:00	24:00	48:00

100	pH	8.1	8.2
	O2 ppm	9.1	8.6
	Cond.	238	240
	Temp(C)	20.5	20.0
50	pH	8.2	8.3
	O2 ppm	9.0	8.6
	Cond.	264	269
	Temp(C)	20.5	20.0
25	pH	8.2	8.4
	O2 ppm	8.9	8.6
	Cond.	278	282
	Temp(C)	20.5	20.0
13	pH	8.2	8.4
	O2 ppm	8.9	8.6
	Cond.	286	288
	Temp(C)	20.5	20.0
6	pH	8.3	8.4
	O2 ppm	8.9	8.5
	Cond.	290	294
	Temp(C)	20.5	20.0
Control	pH	8.3	8.4
	O2 ppm	8.9	8.5
	Cond.	293	294
	Temp(C)	20.5	20.0

TOXICITY TEST REPORT

Sample: 02900031

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (600)
 Laboratory : MOE
 Sampling Method : Grab
 Sampled By : D. Hamilton
 Date Collected : 03/05/90
 Received : 03/06/90
 Tested : 03/07/90 at: 1356
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	01:00	24:00	48:00	%
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
15	0	0	0	0	0
5	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
 LC50 Calculated By : None

TOXICITY TEST PARAMETERS

Sample Number: 02900031

TEST CONC. %	ELAPSED TIME			
	00:00	01:00	24:00	48:00
100	pH 7.6			7.9
	O2 ppm 10.0			8.4
	Cond. 218			224
	Temp(C) 20.0	20.0	20.0	20.0
60	pH 7.8			7.9
	O2 ppm 9.2			8.4
	Cond. 270			272
	Temp(C) 20.0	20.0	20.0	20.0
30	pH 7.9			7.9
	O2 ppm 8.9			8.4
	Cond. 302			309
	Temp(C) 20.0	20.0	20.0	20.0
15	pH 7.9			7.9
	O2 ppm 9.2			8.4
	Cond. 321			330
	Temp(C) 20.0	20.0	20.0	20.0
5	pH 7.9			7.9
	O2 ppm 9.1			8.5
	Cond. 332			339
	Temp(C) 20.0	20.0	20.0	20.0
Control	pH 7.8			7.5
	O2 ppm 9.0			8.5
	Cond. 333			342
	Temp(C) 20.0	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 03900212

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical

Control point : combined effluent, (600)

Laboratory : BAR
Sampling Method : Grab
Sampled By : D. McLaughlin
Date Collected : 03/19/90
Received : 03/20/90
Tested : 03/21/90 at: 1115

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00	48:00
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

TOXICITY TEST PARAMETERS

Sample Number: 03900212

TEST CONC.	ELAPSED TIME		
	%	00:00	24:00

100	pH	8.0		8.2
	O2 ppm	9.2		8.3
	Cond.	240		246
	Temp(C)	20.5	20.0	20.5
50	pH	8.2		8.2
	O2 ppm	9.0		8.2
	Cond.	272		276
	Temp(C)	20.5	20.0	20.5
25	pH	8.3		8.2
	O2 ppm	8.8		8.0
	Cond.	286		291
	Temp(C)	20.5	20.0	20.5
13	pH	8.3		8.2
	O2 ppm	8.8		8.1
	Cond.	294		296
	Temp(C)	20.5	20.0	20.5
6	pH	8.3		8.2
	O2 ppm	8.8		8.2
	Cond.	298		301
	Temp(C)	20.5	20.0	20.5
Control	pH	8.3		8.2
	O2 ppm	8.5		8.4
	Cond.	302		305
	Temp(C)	20.5	20.0	20.5

TOXICITY TEST REPORT

Sample: 03890205

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (700)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Rankin
 Date Collected : 10/10/89
 Received : 10/11/89
 Tested : 10/11/89 at: 1600

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL ^a MORTALITY
%	00:00	04:00	24:00	48:00	%
Control	0	0	0	0	0
6	0	0	0	0	0
13	0	0	0	0	0
25	0	0	0	0	0
50	0	0	0	0	0
100	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 100.0 - 100.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By : INTUITIVE

TOXICITY TEST PARAMETERS

Sample Number: 03890205

TEST CONC. %	ELAPSED TIME			
	00:00	04:00	24:00	48:00

Control	pH	8.4			8.3
	O2 ppm	8.8			8.7
	Cond.	301			297
	Temp(C)	20.0	20.0	20.0	20.0
6	pH	8.4			8.2
	O2 ppm	8.6			8.8
	Cond.	293			300
	Temp(C)	20.0	20.0	20.0	20.0
13	pH	8.4			8.3
	O2 ppm	8.6			8.7
	Cond.	295			296
	Temp(C)	20.0	20.0	20.0	20.0
25	pH	8.4			8.3
	O2 ppm	8.6			8.7
	Cond.	288			289
	Temp(C)	20.0	20.0	20.0	20.0
50	pH	8.3			8.2
	O2 ppm	8.6			8.6
	Cond.	273			276
	Temp(C)	20.0	20.0	20.0	20.0
100	pH	8.2			8.1
	O2 ppm	8.8			8.3
	Cond.	245			246
	Temp(C)	20.0	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 03890259

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (700)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Rankin
 Date Collected : 11/13/89
 Received : 11/14/89
 Tested : 11/14/89 at: 1620

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY	
	%	00:00	04:00	24:00	48:00	%
Control	0	0	0	0	1	8
6	0	0	0	0	0	0
13	0	0	0	0	0	0
25	0	0	0	0	0	0
50	0	0	0	0	0	0
100	0	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03890259

TEST ELAPSED TIME
 CONC. % 00:00 04:00 24:00 48:00

Control	pH	8.2			8.1
	O2 ppm	8.7			8.8
	Cond.	292			289
	Temp(C)	20.5	20.5	20.0	19.0
6	pH	8.2			8.0
	O2 ppm	8.8			8.9
	Cond.	288			291
	Temp(C)	20.5	20.5	20.0	19.0
13	pH	8.2			8.1
	O2 ppm	8.8			8.7
	Cond.	286			287
	Temp(C)	20.5	20.5	20.0	19.0
25	pH	8.2			8.1
	O2 ppm	8.8			8.7
	Cond.	278			280
	Temp(C)	20.5	20.5	20.0	19.0
50	pH	8.2			8.1
	O2 ppm	8.9			8.7
	Cond.	262			265
	Temp(C)	20.5	20.5	20.0	19.0
100	pH	8.2			8.1
	O2 ppm	9.2			8.6
	Cond.	234			236
	Temp(C)	20.5	20.5	20.0	19.0

TOXICITY TEST REPORT

Sample: 03890358

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (700)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. McLaughlin
 Date Collected : 12/13/89
 Received : 12/14/89
 Tested : 12/15/89 at: 1215
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal
 95% fid. limits : 0.0 - 0.0 %
 Comments : Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03890358

TEST CONC.	ELAPSED TIME		
%	00:00	24:00	48:00

100	pH	8.3	8.2
	O2 ppm	9.4	8.5
	Cond.	247	247
	Temp(C)	19.5	19.0
50	pH	8.4	8.4
	O2 ppm	8.9	8.5
	Cond.	273	271
	Temp(C)	19.5	19.0
25	pH	8.4	8.4
	O2 ppm	8.6	8.5
	Cond.	286	284
	Temp(C)	19.5	19.0
13	pH	8.5	8.4
	O2 ppm	8.5	8.6
	Cond.	292	290
	Temp(C)	19.5	19.0
6	pH	8.4	8.4
	O2 ppm	8.4	8.6
	Cond.	295	295
	Temp(C)	19.5	19.0
Control	pH	8.5	8.4
	O2 ppm	8.8	8.5
	Cond.	298	295
	Temp(C)	19.5	19.0

TOXICITY TEST REPORT

Sample: 03900014

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (700)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. McLaughlin
Date Collected : 01/09/90
Received : 01/10/90
Tested : 01/10/90 at: 1600
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E			TOTAL MORTALITY	
	%	00:00	24:00	48:00	%
100	0	0	0		0
50	0	0	0		0
25	0	0	1		8
13	0	0	0		0
6	0	0	0		0
Control	0	0	1		8

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03900014

TEST ELAPSED TIME
CONC. % 00:00 24:00 48:00

100	pH	8.1	8.1
	O2 ppm	10.3	8.6
	Cond.	241	241
	Temp(C)	20.0	19.5 20.0
50	pH	8.2	8.3
	O2 ppm	9.5	8.6
	Cond.	273	273
	Temp(C)	20.0	19.5 20.0
25	pH	8.2	8.3
	O2 ppm	9.2	8.6
	Cond.	291	288
	Temp(C)	20.0	19.5 20.0
13	pH	8.2	8.3
	O2 ppm	8.9	8.4
	Cond.	298	296
	Temp(C)	20.0	19.5 20.0
6	pH	8.3	8.4
	O2 ppm	8.9	8.4
	Cond.	302	301
	Temp(C)	20.0	19.5 20.0
Control	pH	8.3	8.4
	O2 ppm	8.8	8.6
	Cond.	305	307
	Temp(C)	20.0	19.5 20.0

TOXICITY TEST REPORT

Sample: 03900114

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (700)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. McLaughlin
Date Collected : 02/13/90
Received : 02/14/90
Tested : 02/14/90 at: 1450
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03900114

TEST CONC. %	ELAPSED TIME		
	00:00	24:00	48:00

100	pH	8.1	8.2
	O2 ppm	9.2	8.4
	Cond.	229	234
	Temp(C)	20.5	20.0
50	pH	8.2	8.3
	O2 ppm	9.1	8.4
	Cond.	260	265
	Temp(C)	20.5	20.0
25	pH	8.2	8.3
	O2 ppm	9.0	8.5
	Cond.	278	280
	Temp(C)	20.5	20.0
13	pH	8.2	8.4
	O2 ppm	8.9	8.5
	Cond.	283	288
	Temp(C)	20.5	20.0
6	pH	8.3	8.4
	O2 ppm	8.9	8.5
	Cond.	290	292
	Temp(C)	20.5	20.0
Control	pH	8.3	8.4
	O2 ppm	8.9	8.5
	Cond.	293	290
	Temp(C)	20.5	20.0

TOXICITY TEST REPORT

Sample: 02900030

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (700)
 Laboratory : MOE
 Sampling Method : Grab
 Sampled By : D. Hamilton
 Date Collected : 03/05/90
 Received : 03/06/90
 Tested : 03/07/90 at: 1343

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY	
	%	00:00	01:00	24:00	48:00	%
100	0	0	0	0	0	0
60	0	0	0	0	0	0
30	0	0	0	0	0	0
15	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

48 Hour LC50 : Non-lethal
 95% fid. limits : 0.0 - 0.0 %
 Comments : MISA Audit

SLOPE of Mortality Curve :
 LC50 Calculated By : None

TOXICITY TEST PARAMETERS

Sample Number: 02900030

TEST CONC.	ELAPSED TIME			
%	00:00	01:00	24:00	48:00

100	pH	7.7			7.8
	O2 ppm	10.4			8.3
	Cond.	212			217
	Temp(C)	20.0	20.0	20.0	20.0
60	pH	7.8			7.9
	O2 ppm	9.6			8.2
	Cond.	264			270
	Temp(C)	20.0	20.0	20.0	20.0
30	pH	7.9			7.9
	O2 ppm	9.3			8.2
	Cond.	300			305
	Temp(C)	20.0	20.0	20.0	20.0
15	pH	7.8			7.9
	O2 ppm	9.2			8.3
	Cond.	318			322
	Temp(C)	20.0	20.0	20.0	20.0
5	pH	7.8			7.9
	O2 ppm	9.1			8.3
	Cond.	327			337
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH	7.8			7.6
	O2 ppm	9.1			8.4
	Cond.	328			341
	Temp(C)	20.0	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 03900213

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (700)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. McLaughlin
 Date Collected : 03/19/90
 Received : 03/20/90
 Tested : 03/21/90 at: 1125
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00 48:00	
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
 LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03900213

TEST CONC. %	ELAPSED TIME		
	00:00	24:00	48:00

100	pH	8.0	8.2
	O2 ppm	9.3	8.6
	Cond.	230	237
	Temp(C)	20.5	20.0 20.5
50	pH	8.0	8.2
	O2 ppm	8.9	8.5
	Cond.	267	271
	Temp(C)	20.5	20.0 20.5
25	pH	8.2	8.2
	O2 ppm	8.8	8.5
	Cond.	286	291
	Temp(C)	20.5	20.0 20.5
13	pH	8.3	8.2
	O2 ppm	8.8	8.5
	Cond.	290	296
	Temp(C)	20.5	20.0 20.5
6	pH	8.3	8.2
	O2 ppm	8.8	8.5
	Cond.	295	299
	Temp(C)	20.5	20.0 20.5
Control	pH	8.3	8.2
	O2 ppm	8.5	8.5
	Cond.	302	304
	Temp(C)	20.5	20.0 20.5

TOXICITY TEST REPORT

Sample: 03890202

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (900)
Laboratory : BAR
Sampling Method : Grab
Sampled By : M. Rankin
Date Collected : 10/10/89
Received : 10/11/89
Tested : 10/11/89 at: 1600
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E				TOTAL MORTALITY %
	%	00:00	04:00	24:00	48:00
Control	0	0	0	0	0
6	0	0	0	0	0
13	0	0	0	0	0
25	0	0	0	0	0
50	0	0	0	0	0
100	0	0	0	0	0

48 Hour LC50 : Non-lethal
95% fid. limits : 100.0 - 100.0 %
Comments : Non-lethal.

SLOPE of Mortality Curve :
LC50 Calculated By : INTUITIVE

TOXICITY TEST PARAMETERS

Sample Number: 03890202

TEST CONC. %	E L A P S E D T I M E			
	00:00	04:00	24:00	48:00

Control	pH	8.4		8.3
	O2 ppm	8.8		8.9
	Cond.	301		297
	Temp(C)	20.0	20.0	20.0
6	pH	8.5		8.3
	O2 ppm	8.7		9.0
	Cond.	494		501
	Temp(C)	20.0	20.0	20.0
13	pH	8.5		8.3
	O2 ppm	8.7		8.9
	Cond.	737		745
	Temp(C)	20.0	20.0	20.0
25	pH	8.5		8.3
	O2 ppm	8.7		8.8
	Cond.	1107		1105
	Temp(C)	20.0	20.0	20.0
50	pH	8.5		8.3
	O2 ppm	8.7		8.6
	Cond.	1907		1923
	Temp(C)	20.0	20.0	20.0
100	pH	8.6		8.3
	O2 ppm	8.8		8.4
	Cond.	3440		3500
	Temp(C)	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 03890260

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (900)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Rankin
 Date Collected : 11/13/89
 Received : 11/14/89
 Tested : 11/14/89 at: 1620
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY	
	%	00:00	04:00	24:00	47:00	%
Control	0	0	0	0		0
6	0	0	0	0		0
13	0	0	0	0		0
25	0	0	1	1		8
50	0	0	1	1		8
100	0	0	0	0		0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03890260

TEST ELAPSED TIME
 CONC. % 00:00 04:00 24:00 47:00

Control	pH	8.2			8.1
	O2 ppm	8.8			8.9
	Cond.	292			289
	Temp(C)	20.5	20.5	20.0	19.0
6	pH	8.2			8.1
	O2 ppm	8.8			9.0
	Cond.	484			491
	Temp(C)	20.5	20.5	20.0	19.0
13	pH	8.2			8.2
	O2 ppm	8.8			8.9
	Cond.	717			723
	Temp(C)	20.5	20.5	20.0	19.0
25	pH	8.2			8.3
	O2 ppm	8.8			8.8
	Cond.	1114			1115
	Temp(C)	20.5	20.5	20.0	19.0
50	pH	8.4			8.3
	O2 ppm	8.9			8.8
	Cond.	1879			1892
	Temp(C)	20.5	20.5	20.0	19.0
100	pH	8.6			8.3
	O2 ppm	9.1			8.7
	Cond.	3440			3470
	Temp(C)	20.5	20.5	20.0	19.0

TOXICITY TEST REPORT

Sample: 03890361

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (900)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. McLaughlin
Date Collected : 12/13/89
Received : 12/14/89
Tested : 12/15/89 at: 1410
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00 48:00	
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

TOXICITY TEST PARAMETERS

Sample Number: 03890361

TEST CONC.	ELAPSED TIME		
	%	00:00	24:00 48:00

100	pH	8.3	8.2
	O2 ppm	9.7	8.6
	Cond.	3640	3600
	Temp(C)	19.5	19.0
50	pH	8.3	8.3
	O2 ppm	9.2	8.5
	Cond.	1980	1970
	Temp(C)	19.5	19.0
25	pH	8.4	8.4
	O2 ppm	8.9	8.5
	Cond.	1151	1146
	Temp(C)	19.5	19.0
13	pH	8.4	8.4
	O2 ppm	8.6	8.5
	Cond.	726	739
	Temp(C)	19.5	19.0
6	pH	8.4	8.4
	O2 ppm	8.6	8.4
	Cond.	506	507
	Temp(C)	19.5	19.0
Control	pH	8.5	8.4
	O2 ppm	8.8	8.3
	Cond.	298	298
	Temp(C)	19.5	19.0

TOXICITY TEST REPORT

Sample: 03900012

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (900)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. McLaughlin
 Date Collected : 01/09/90
 Received : 01/10/90
 Tested : 01/10/90 at: 1510
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00 48:00	
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	1	2	16
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
 LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03900012

TEST CONC.	ELAPSED TIME		
%	00:00	24:00	48:00

100	pH	8.1	8.1
	O2 ppm	10.2	8.6
	Cond.	3560	3530
	Temp(C)	20.0	19.5 20.0
50	pH	8.2	8.2
	O2 ppm	9.5	8.6
	Cond.	1965	1950
	Temp(C)	20.0	19.5 20.0
25	pH	8.2	8.3
	O2 ppm	9.1	8.7
	Cond.	1156	1148
	Temp(C)	20.0	19.5 20.0
13	pH	8.2	8.3
	O2 ppm	9.0	8.6
	Cond.	1142	1142
	Temp(C)	20.0	19.5 20.0
6	pH	8.2	8.4
	O2 ppm	8.8	8.6
	Cond.	494	495
	Temp(C)	20.0	19.5 20.0
Control	pH	8.3	8.4
	O2 ppm	8.8	8.2
	Cond.	305	307
	Temp(C)	20.0	19.5 20.0

TOXICITY TEST REPORT

Sample: 03900115

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (900)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. McLaughlin
 Date Collected : 02/13/90
 Received : 02/14/90
 Tested : 02/14/90 at: 1500
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00 48:00	
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03900115

TEST ELAPSED TIME
 CONC. % 00:00 24:00 48:00

100	pH	8.7	8.3
	O2 ppm	9.1	8.4
	Cond.	2960	2980
	Temp(C)	20.0 20.0	19.5
50	pH	8.4	8.3
	O2 ppm	8.9	8.5
	Cond.	1658	1662
	Temp(C)	20.0 20.0	19.5
25	pH	8.3	8.4
	O2 ppm	9.0	8.4
	Cond.	991	995
	Temp(C)	20.0 20.0	19.5
13	pH	8.3	8.3
	O2 ppm	8.9	8.4
	Cond.	654	658
	Temp(C)	20.0 20.0	19.5
6	pH	8.3	8.4
	O2 ppm	8.9	8.4
	Cond.	469	467
	Temp(C)	20.0 20.0	19.5
Control	pH	8.3	8.4
	O2 ppm	8.9	8.4
	Cond.	293	292
	Temp(C)	20.0 20.0	19.5

TOXICITY TEST REPORT

Sample: 02900032

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (900)
Laboratory : MOE
Sampling Method : Grab
Sampled By : D. Hamilton
Date Collected : 03/05/90
Received : 03/06/90
Tested : 03/07/90 at: 1438
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	01:00	24:00	48:00	%
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
15	0	0	0	0	0
5	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit/high conductivity

TOXICITY TEST PARAMETERS

Sample Number: 02900032

TEST CONC. %	ELAPSED TIME			
	00:00	01:00	24:00	48:00
100	pH 7.8			8.0
	O2 ppm 10.0			8.4
	Cond. 2310			2300
	Temp(C) 20.0	20.0	20.0	20.0
60	pH 7.9			8.0
	O2 ppm 9.5			8.4
	Cond. 1520			1540
	Temp(C) 20.0	20.0	20.0	20.0
30	pH 7.9			8.0
	O2 ppm 9.2			8.4
	Cond. 930			912
	Temp(C) 20.0	20.0	20.0	20.0
15	pH 7.8			7.9
	O2 ppm 8.9			8.4
	Cond. 622			639
	Temp(C) 20.0	20.0	20.0	20.0
5	pH 7.8			7.9
	O2 ppm 9.1			8.5
	Cond. 427			437
	Temp(C) 20.0	20.0	20.0	20.0
Control	pH 7.7			7.6
	O2 ppm 8.9			8.4
	Cond. 325			329
	Temp(C) 20.0	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 03900214

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical

Control point : combined effluent, (900)

Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. McLaughlin
 Date Collected : 03/19/90
 Received : 03/20/90
 Tested : 03/21/90 at: 1135

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E			TOTAL MORTALITY	
	%	00:00	24:00	48:00	%
100	0	0	0		0
50	0	0	0		0
25	0	0	0		0
13	0	0	0		0
6	0	0	0		0
Control	0	0	0		0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
 LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03900214

TEST CONC. %	E L A P S E D T I M E		
		00:00	24:00

100	pH	8.0		8.2
	O2 ppm	9.2		8.6
	Cond.	1612		1618
	Temp(C)	20.5	20.0	20.5
50	pH	8.1		8.2
	O2 ppm	8.9		8.6
	Cond.	970		976
	Temp(C)	20.5	20.0	20.5
25	pH	8.1		8.2
	O2 ppm	8.8		8.7
	Cond.	639		641
	Temp(C)	20.5	20.0	20.5
13	pH	8.2		8.2
	O2 ppm	8.8		8.7
	Cond.	479		473
	Temp(C)	20.5	20.0	20.5
6	pH	8.3		8.2
	O2 ppm	8.7		8.7
	Cond.	383		389
	Temp(C)	20.5	20.0	20.5
Control	pH	8.3		8.2
	O2 ppm	8.5		8.5
	Cond.	302		305
	Temp(C)	20.5	20.0	20.5

TOXICITY TEST REPORT

Sample: 03890204

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : OT cooling water, (1000)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : M. Rankin
 Date Collected : 10/10/89
 Received : 10/11/89
 Tested : 10/11/89 at: 1600
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY %
	%	00:00	04:00	24:00 48:00	
Control	0	0	0	0	0
6	0	0	0	1	8
13	0	0	0	2	16
25	0	0	0	0	0
50	0	0	0	0	0
100	0	0	0	0	0

48 Hour LC50 : Non-lethal
 95% fid. limits : 100.0 - 100.0 %
 Comments : 16.7% mortality @ 13%

SLOPE of Mortality Curve :
 LC50 Calculated By : INTUITIVE

TOXICITY TEST PARAMETERS

Sample Number: 03890204

TEST ELAPSED TIME
 CONC. X
 00:00 04:00 24:00 48:00

Control	pH	8.4			8.3
	O2 ppm	8.8			9.8
	Cond.	301			301
	Temp(C)	20.0	20.0	20.0	20.0
6	pH	8.3			8.3
	O2 ppm	8.7			9.7
	Cond.	293			302
	Temp(C)	20.0	20.0	20.0	20.0
13	pH	8.4			8.3
	O2 ppm	8.7			9.6
	Cond.	293			299
	Temp(C)	20.0	20.0	20.0	20.0
25	pH	8.4			8.3
	O2 ppm	8.7			9.3
	Cond.	287			292
	Temp(C)	20.0	20.0	20.0	20.0
50	pH	8.3			8.2
	O2 ppm	8.7			9.1
	Cond.	276			281
	Temp(C)	20.0	20.0	20.0	20.0
100	pH	8.1			8.0
	O2 ppm	8.8			8.8
	Cond.	252			257
	Temp(C)	20.0	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 03890262

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical

Control point : OT cooling water, (1000)

Laboratory : BAR
Sampling Method : Grab
Sampled By : M. Rankin
Date Collected : 11/13/89
Received : 11/14/89
Tested : 11/14/89 at: 1645

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	%
Control	0	0	1	1	8
6	0	0	0	0	0
13	0	0	0	0	0
25	0	0	0	0	0
50	0	0	0	0	0
100	0	0	2	2	16

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100%

SLOPE of Mortality Curve :
LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03890262

TEST CONC.	ELAPSED TIME			
%	00:00	04:00	24:00	48:00

Control	pH	8.2			8.1
	O2 ppm	8.7			8.6
	Cond.	292			292
	Temp(C)	20.5	20.5	20.0	20.0
6	pH	8.2			8.1
	O2 ppm	8.7			8.6
	Cond.	292			291
	Temp(C)	20.5	20.5	20.0	20.0
13	pH	8.2			8.1
	O2 ppm	8.9			8.7
	Cond.	291			290
	Temp(C)	20.5	20.5	20.0	20.0
25	pH	8.2			8.1
	O2 ppm	8.9			8.8
	Cond.	287			287
	Temp(C)	20.5	20.5	20.0	20.0
50	pH	8.2			8.1
	O2 ppm	8.9			8.8
	Cond.	275			278
	Temp(C)	20.5	20.5	20.0	20.0
100	pH	8.3			8.0
	O2 ppm	9.1			9.0
	Cond.	256			261
	Temp(C)	20.5	20.5	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT

Sample: 03900017

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical
Control point : OT cooling water, (1000)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. McLaughlin
Date Collected : 01/09/90
Received : 01/10/90
Tested : 01/10/90 at: 1705
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00	
100	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03900017

TEST CONC.	%	ELAPSED TIME		
		00:00	24:00	48:00
100	pH	8.0		8.1
	O2 ppm	10.6		8.5
	Cond.	269		277
	Temp(C)	20.0	19.5	20.0
Control	pH	8.2		8.4
	O2 ppm	8.9		8.6
	Cond.	301		312
	Temp(C)	20.0	19.5	20.0

TOXICITY TEST REPORT

Sample: 02900035

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical

Control point : OT cooling water, (1000)

Laboratory : MOE
 Sampling Method : Grab
 Sampled By : D. Hamilton
 Date Collected : 03/12/90
 Received : 03/13/90
 Tested : 03/13/90 at: 1249

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	01:00	24:00	48:00	%
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
15	0	0	0	0	0
5	0	0	0	1	8
Control	0	0	0	1	8

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
 LC50 Calculated By : None

TOXICITY TEST PARAMETERS

Sample Number: 02900035

TEST CONC.	ELAPSED TIME			
%	00:00	01:00	24:00	48:00

100	pH	7.6			7.8
	O2 ppm	10.2			8.2
	Cond.	228			229
	Temp(C)	20.0	20.0	20.0	20.0
60	pH	7.7			7.9
	O2 ppm	9.3			8.3
	Cond.	260			262
	Temp(C)	20.0	20.0	20.0	20.0
30	pH	7.7			7.9
	O2 ppm	9.4			8.2
	Cond.	283			285
	Temp(C)	20.0	20.0	20.0	20.0
15	pH	7.8			7.9
	O2 ppm	9.3			8.3
	Cond.	294			297
	Temp(C)	20.0	20.0	20.0	20.0
5	pH	7.8			7.9
	O2 ppm	9.1			8.2
	Cond.	302			304
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH	7.8			7.9
	O2 ppm	8.9			8.3
	Cond.	298			305
	Temp(C)	20.0	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 03900215

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : OT cooling water, (1000)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. McLaughlin
 Date Collected : 03/19/90
 Received : 03/20/90
 Tested : 03/20/90 at: 1700
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00	
100	0	0	0	0
100	0	0	0	0
Control	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal
 95% fid. limits : 0.0 - 0.0 %
 Comments : Non lethal

SLOPE of Mortality Curve :
 LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03900215

TEST CONC.	ELAPSED TIME			
	%	00:00	24:00	48:00
100	pH	8.1	8.0	
	O2 ppm	9.4	8.6	
	Cond.	949	932	
	Temp(C)	21.0	20.0	20.0
100	pH	8.1	7.9	
	O2 ppm	9.4	8.6	
	Cond.	949	950	
	Temp(C)	21.0	20.0	20.0
Control	pH	8.5	8.3	
	O2 ppm	8.6	8.7	
	Cond.	299	297	
	Temp(C)	21.0	20.0	20.0
Control	pH	8.5	8.3	
	O2 ppm	8.6	8.6	
	Cond.	299	294	
	Temp(C)	21.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 03890274

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : process effluent, (2100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. Weatherstone
 Date Collected : 11/16/89
 Received : 11/17/89
 Tested : 11/20/89 at: 1630
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E				TOTAL MORTALITY	
	%	00:00	04:00	24:00	48:00	%
Control	0	0	0	0		0
6	0	0	0	0		0
13	0	0	0	0		0
25	0	0	0	0		0
50	0	0	0	0		0
100	0	0	0	0		0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03890274

TEST CONC. %	E L A P S E D T I M E			
	00:00	04:00	24:00	48:00

Control	pH	8.5			8.3
	O2 ppm	7.9			10.4
	Cond.	300			298
	Temp(C)	20.0	20.0	20.0	19.5
6	pH	8.4			8.4
	O2 ppm	9.3			10.1
	Cond.	770			748
	Temp(C)	20.0	20.0	20.0	19.5
13	pH	8.2			8.3
	O2 ppm	9.1			10.2
	Cond.	1303			1269
	Temp(C)	20.0	20.0	20.0	19.5
25	pH	8.1			8.3
	O2 ppm	9.1			10.0
	Cond.	2120			2070
	Temp(C)	20.0	20.0	20.0	19.5
50	pH	7.9			8.2
	O2 ppm	8.7			9.6
	Cond.	3910			3780
	Temp(C)	20.0	20.0	20.0	19.5
100	pH	7.8			8.0
	O2 ppm	8.5			9.0
	Cond.	7300			7120
	Temp(C)	20.0	20.0	20.0	19.5

TOXICITY TEST REPORT

Sample: 03890357

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical
Control point : process effluent, (2100)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. McLaughlin
Date Collected : 12/13/89
Received : 12/14/89
Tested : 12/15/89 at: 1110
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00 48:00	
100	0	0	3	25
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50>100

TOXICITY TEST PARAMETERS

Sample Number: 03890357

TEST CONC.	ELAPSED TIME		
%	00:00	24:00	48:00

100	pH	7.3	7.6
	O2 ppm	1.6	2.5
	Cond.	1198	1189
	Temp(C)	19.5	19.0
50	pH	7.5	7.7
	O2 ppm	3.2	2.8
	Cond.	6430	6350
	Temp(C)	19.5	19.0
25	pH	7.8	7.9
	O2 ppm	5.3	5.7
	Cond.	3540	3490
	Temp(C)	19.5	19.0
13	pH	8.1	8.1
	O2 ppm	7.3	7.3
	Cond.	1999	1949
	Temp(C)	19.5	19.0
6	pH	8.3	8.3
	O2 ppm	8.4	8.2
	Cond.	1099	1063
	Temp(C)	19.5	19.0
Control	pH	8.5	8.4
	O2 ppm	8.8	8.7
	Cond.	298	292
	Temp(C)	19.5	19.0

TOXICITY TEST REPORT

Sample: 03900011

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical

Control point : process effluent, (2100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : D. McLaughlin
Date Collected : 01/09/90
Received : 01/10/90
Tested : 01/10/90 at: 1500

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00 48:00	
100	0	0	0	0
50	0	0	0	0
25	0	1	1	8
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03900011

TEST ELAPSED TIME
CONC. % 00:00 24:00 48:00

100	pH	8.7	8.2
	O2 ppm	8.6	3.7
	Cond.	4080	4070
	Temp(C)	20.0	19.5 20.0
50	pH	8.6	8.2
	O2 ppm	7.6	6.3
	Cond.	2260	2250
	Temp(C)	20.0	19.5 20.0
25	pH	8.5	8.3
	O2 ppm	8.3	7.5
	Cond.	1306	1305
	Temp(C)	20.0	19.5 20.0
13	pH	8.4	8.3
	O2 ppm	8.6	7.9
	Cond.	837	835
	Temp(C)	20.0	19.5 20.0
6	pH	8.3	8.3
	O2 ppm	8.7	8.2
	Cond.	550	555
	Temp(C)	20.0	19.5 20.0
Control	pH	8.3	8.3
	O2 ppm	8.8	8.2
	Cond.	305	307
	Temp(C)	20.0	19.5 20.0

TOXICITY TEST REPORT

Sample: 03900116

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : process effluent, (2100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. McLaughlin
 Date Collected : 02/13/90
 Received : 02/14/90
 Tested : 02/14/90 at: 1505
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03900116

TEST CONC. %	ELAPSED TIME		
	00:00	24:00	48:00

100	pH	8.3	8.0
	O2 ppm	8.0	6.0
	Cond.	3460	3570
	Temp(C)	20.5	20.0
50	pH	8.3	8.2
	O2 ppm	8.1	7.1
	Cond.	1937	1964
	Temp(C)	20.5	20.0
25	pH	8.3	8.3
	O2 ppm	8.5	7.8
	Cond.	1118	1133
	Temp(C)	20.5	20.0
13	pH	8.3	8.3
	O2 ppm	8.6	8.0
	Cond.	734	739
	Temp(C)	20.5	20.0
6	pH	8.3	8.3
	O2 ppm	8.8	8.3
	Cond.	496	498
	Temp(C)	20.5	20.0
Control	pH	8.3	8.5
	O2 ppm	8.9	8.4
	Cond.	293	304
	Temp(C)	20.5	20.0

TOXICITY TEST REPORT

Sample: 02900034

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
Sarnia, ONT
(910109)
Region : Southwest
Industry : Organic Chemical
Control point : process effluent, (2100)
Laboratory : MOE
Sampling Method : Grab
Sampled By : D. Hamilton
Date Collected : 03/12/90
Received : 03/13/90
Tested : 03/13/90 at: 1227
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E				TOTAL MORTALITY	
	%	00:00	01:00	24:00	48:00	%
100	0	0	0	0	0	0
60	0	0	0	0	0	0
30	0	0	0	0	0	0
15	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit/high conductivity, low D. O.

TOXICITY TEST PARAMETERS

Sample Number: 02900034

TEST CONC. %	ELAPSED TIME				
		00:00	01:00	24:00	48:00
100	pH	7.7			7.9
	O2 ppm	3.8			6.9
	Cond.	2830			2730
	Temp(C)	20.0	20.0	20.0	20.0
60	pH	7.7			7.9
	O2 ppm	6.8			7.2
	Cond.	1840			1800
	Temp(C)	20.0	20.0	20.0	20.0
30	pH	7.8			7.9
	O2 ppm	7.7			7.6
	Cond.	1088			1066
	Temp(C)	20.0	20.0	20.0	20.0
15	pH	7.7			7.8
	O2 ppm	8.1			7.8
	Cond.	694			689
	Temp(C)	20.0	20.0	20.0	20.0
5	pH	7.6			7.7
	O2 ppm	8.3			8.1
	Cond.	433			425
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH	7.6			7.8
	O2 ppm	8.8			8.2
	Cond.	306			292
	Temp(C)	20.0	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 03900216

TEST CONDITIONS

Company : Dow Chemical Canada Inc.
 Sarnia, ONT
 (910109)
 Region : Southwest
 Industry : Organic Chemical
 Control point : process effluent, (2100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. McLaughlin
 Date Collected : 03/19/90
 Received : 03/20/90
 Tested : 03/21/90 at: 1140
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00	48:00
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
 LC50 Calculated By : Intuitive

TOXICITY TEST PARAMETERS

Sample Number: 03900216

TEST CONC.	ELAPSED TIME		
%	00:00	24:00	48:00

100	pH	7.6	7.9
	O2 ppm	7.7	7.9
	Cond.	3310	3290
	Temp(C)	20.5	20.0
50	pH	7.9	8.0
	O2 ppm	8.3	8.4
	Cond.	1812	1814
	Temp(C)	20.5	20.0
25	pH	8.1	8.2
	O2 ppm	8.3	8.5
	Cond.	1077	1082
	Temp(C)	20.5	20.0
13	pH	8.2	8.2
	O2 ppm	8.5	8.5
	Cond.	701	716
	Temp(C)	20.5	20.0
6	pH	8.2	8.2
	O2 ppm	8.7	8.6
	Cond.	498	512
	Temp(C)	20.5	20.0
Control	pH	8.3	8.2
	O2 ppm	8.5	8.6
	Cond.	302	306
	Temp(C)	20.5	20.0

COMPANY: Du Pont Canada Inc., Corunna
(80309)
(now with St. Clair River Site)
SECTOR: Organic Chemical
REGION: Southwest

SUMMARY

The data for thirteen trout bioassays, conducted on intake water and combined effluent samples collected between October 1989 and March 1990, were provided by Du Pont Canada Incorporated. All thirteen samples were determined to have been non-acutely lethal to test fish.

intake water

05890088 sampled: 10/18/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05890111 sampled: 11/15/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05890127 sampled: 12/13/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900008 sampled: 01/10/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900035 sampled: 02/14/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: 10% Control Mortalities, Valid by Protocol

05900056 sampled: 03/14/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

combined effluent

05890089 sampled: 10/18/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05890110 sampled: 11/15/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05890126 sampled: 12/13/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

Du Pont Canada Inc. (continued)

05900009 sampled: 01/10/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900036 sampled: 02/14/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: 10% Control Mortalities - Valid by Protocol

01900016 sampled: 02/20/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900055 sampled: 03/14/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

combined effluent

01900017 sampled: 02/20/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

rain gauge

TOXICITY TEST REPORT

Sample: 05890088

TEST CONDITIONS

Company : Du Pont Canada Inc.
Corunna, ONT
(80309)
Region : Southwest
Industry : Organic Chemical
Control point : intake water, (100)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C.Ferguson
Date Collected : 10/18/89
Received : 10/18/89
Tested : 10/19/89 at: 1030
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
	%	00:00	23:10	50:00	76:00 97:00	
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890088

TEST CONC.	ELAPSED TIME				
%	00:00	23:10	50:00	76:00	97:00

100	pH	7.8	7.5	7.5	7.5	7.6
	O2 ppm	10.3	8.3	9.2	9.2	9.2
	Cond.	220				220
	Temp(C)	15.0	15.0	15.0	15.0	15.0
100	pH	7.8	7.5	7.5	7.5	7.5
	O2 ppm	10.3	8.7	9.2	9.2	9.1
	Cond.	220				215
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	6.9	7.3	7.3	7.3	7.3
	O2 ppm	8.3	8.5	9.0	9.2	8.8
	Cond.	170				175
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	6.9	7.3	7.3	7.4	7.4
	O2 ppm	8.0	7.6	8.8	8.6	8.6
	Cond.	175				172
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 05890111

TEST CONDITIONS

Company : Du Pont Canada Inc.
Corunna, ONT
(80309)
Region : Southwest
Industry : Organic Chemical
Control point : intake water, (100)
Laboratory : Pollutech
Sampling Method : grab
Sampled By : C. Ferguson
Date Collected : 11/15/89
Received : 11/15/89
Tested : 11/16/89 at: 1230
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	22:10	49:00	72:10	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 05890111

TEST CONC.	ELAPSED TIME				
%	00:00	22:10	49:00	72:10	96:00
100	pH 7.8	7.9	7.8	7.8	7.8
	O2 ppm 10.9	10.3	9.9	9.9	10.2
	Cond. 240				230
	Temp(C) 15.0	15.0	15.0	15.0	15.0
100	pH 7.8	7.8	7.8	7.8	7.8
	O2 ppm 10.6	10.2	10.2	10.0	10.6
	Cond. 238				230
	Temp(C) 15.0	15.0	15.0	15.0	15.0
Control	pH 7.2	7.6	7.7	7.7	7.8
	O2 ppm 9.9	10.0	9.5	9.5	9.9
	Cond. 165				165
	Temp(C) 15.0	15.0	15.0	15.0	15.0
Control	pH 7.2	7.8	7.8	7.8	7.9
	O2 ppm 9.8	10.2	9.8	10.2	10.2
	Cond. 165				162
	Temp(C) 15.0	15.0	15.0	15.0	15.0

MISA Trout

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST REPORT

Sample: 05890127

TEST CONDITIONS

Company : Du Pont Canada Inc.
Corunna, ONT
(80309)
Region : Southwest
Industry : Organic Chemical
Control point : intake water, (100)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : P. Tymstra
Date Collected : 12/13/89
Received : 12/13/89
Tested : 12/13/89 at: 1700
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	18:00	41:00	65:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

TOXICITY TEST PARAMETERS

Sample Number: 05890127

TEST CONC. %		ELAPSED TIME				
		00:00	18:00	41:00	65:00	96:00
100	pH	7.7	7.6	7.7	7.8	8.0
	O2 ppm	11.2	9.5	9.4	9.6	9.0
	Cond.	232				236
	Temp(C)	15.0	15.0	15.0	15.0	15.0
100	pH	7.7	7.6	7.8	7.8	8.0
	O2 ppm	11.2	9.6	9.3	9.2	9.2
	Cond.	235				238
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.7	7.5	7.8	7.9	8.0
	O2 ppm	11.4	9.8	9.9	9.8	9.6
	Cond.	165				174
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.7	7.5	7.8	7.9	8.0
	O2 ppm	11.5	9.8	10.0	9.6	9.6
	Cond.	165				174
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 05900008

TEST CONDITIONS

Company : Du Pont Canada Inc.
Corunna, ONT
(80309)
Region : Southwest
Industry : Organic Chemical
Control point : intake water, (100)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : P.Tymstra
Date Collected : 01/10/90
Received : 01/10/90
Tested : 01/10/90 at: 1645
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	19:25	41:55	72:25	96:55	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	1	1	10

96 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900008

TEST CONC. %	ELAPSED TIME				
	00:00	19:25	41:55	72:25	96:55
100	pH	7.8	7.6	7.6	7.8
	O2 ppm	11.6	8.8	8.3	8.4
	Cond.	235			250
	Temp(C)	15.0	15.0	15.0	15.0
100	pH	7.8	7.5	7.6	7.7
	O2 ppm	11.7	8.6	8.0	8.6
	Cond.	235			250
	Temp(C)	15.0	15.0	15.0	15.0
Control	pH	7.5	7.6	7.6	7.8
	O2 ppm	11.2	9.2	8.4	9.3
	Cond.	170			185
	Temp(C)	15.0	15.0	15.0	15.0
Control	pH	7.5	7.5	7.6	7.7
	O2 ppm	11.0	9.0	8.2	8.6
	Cond.	175			185
	Temp(C)	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 05900035

TEST CONDITIONS

Company : Du Pont Canada Inc.
Corunna, ONT
(80309)
Region : Southwest
Industry : Organic Chemical
Control point : intake water, (100)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C.Ferguson
Date Collected : 02/14/90
Received : 02/14/90
Tested : 02/15/90 at: 1130
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	23:10	47:10	71:10	97:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	1	10
Control	0	0	0	0	1	10

96 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments : 10% Control Mortalities, Valid by Protocol

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900035

TEST CONC. %	ELAPSED TIME				
	00:00	23:10	47:10	71:10	97:00

100	pH	7.7	7.7
	O2 ppm	11.8	9.0
	Cond.	210	228
	Temp(C)	15.0	15.0
100	pH	7.7	7.7
	O2 ppm	11.6	9.2
	Cond.	212	228
	Temp(C)	15.0	15.0
Control	pH	7.7	7.4
	O2 ppm	9.6	9.5
	Cond.	170	170
	Temp(C)	15.0	15.0
Control	pH	7.7	7.4
	O2 ppm	9.8	9.4
	Cond.	172	175
	Temp(C)	15.0	15.0

TOXICITY TEST REPORT

Sample: 05900056

TEST CONDITIONS

Company : Du Pont Canada Inc.
Corunna, ONT
(80309)
Region : Southwest
Industry : Organic Chemical
Control point : intake water, (100)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C. Ferguson
Date Collected : 03/14/90
Received : 03/14/90
Tested : 03/15/90 at: 1130
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	25:25	48:10	71:10	97:10	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900056

TEST CONC.	ELAPSED TIME				
%	00:00	25:25	48:10	71:10	97:10

100	pH	8.0	7.9
	O2 ppm	11.2	9.4
	Cond.	220	228
	Temp(C)	15.0	15.0
100	pH	8.0	8.0
	O2 ppm	11.2	9.0
	Cond.	220	228
	Temp(C)	15.0	15.0
Control	pH	7.5	7.7
	O2 ppm	10.8	9.1
	Cond.	168	180
	Temp(C)	15.0	15.0
Control	pH	7.6	7.7
	O2 ppm	10.7	9.1
	Cond.	168	180
	Temp(C)	15.0	15.0

TOXICITY TEST REPORT

Sample: 05890089

TEST CONDITIONS

Company : Du Pont Canada Inc.
 Corunna, ONT
 (80309)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (200)
 Laboratory : Pollutech
 Sampling Method : Grab
 Sampled By : C. Ferguson
 Date Collected : 10/18/89
 Received : 10/18/89
 Tested : 10/19/89 at: 1030
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	23:10	50:00	73:00	97:00	%
100	0	0	0	0	0	0
75	0	0	0	0	0	0
56	0	0	0	0	0	0
25	0	0	0	0	0	0
10	0	0	0	0	1	10
1	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890089

TEST ELAPSED TIME
 CONC. % 00:00 23:10 50:00 73:00 97:00

100	pH	7.7	7.4	7.5	7.4	7.5
	O2 ppm	8.9	8.2	8.6	8.8	8.3
	Cond.	250				239
	Temp(C)	15.0	15.0	15.0	15.0	15.0
75	pH	7.3	7.4	7.5	7.4	7.5
	O2 ppm	8.5	8.2	8.2	9.0	9.1
	Cond.	230				220
	Temp(C)	15.0	15.0	15.0	15.0	15.0
56	pH	7.2	7.4	7.4	7.4	7.5
	O2 ppm	8.3	8.2	8.6	8.9	9.0
	Cond.	210				105
	Temp(C)	15.0	15.0	15.0	15.0	15.0
25	pH	7.1	7.4	7.4	7.4	7.5
	O2 ppm	8.1	8.8	8.6	8.8	9.0
	Cond.	195				191
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.1	7.3	7.4	7.4	7.4
	O2 ppm	8.0	8.0	8.1	8.7	8.9
	Cond.	182				180
	Temp(C)	15.0	15.0	15.0	15.0	15.0
1	pH	7.0	7.3	7.3	7.3	7.4
	O2 ppm	8.0	7.7	8.6	8.6	8.7
	Cond.	178				175
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	6.9	7.3	7.3	7.4	7.3
	O2 ppm	8.3	8.5	9.0	9.2	8.8
	Cond.	170				175
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	6.9	7.3	7.3	7.4	7.4
	O2 ppm	8.0	7.6	8.8	9.0	8.6
	Cond.	175				172
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 05890110

TEST CONDITIONS

Company : Du Pont Canada Inc.
Corunna, ONT
(80309)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (200)
Laboratory : Pollutech
Sampling Method : grab
Sampled By : C. Ferguson
Date Collected : 11/15/89
Received : 11/15/89
Tested : 11/16/89 at: 1230
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY	
	%	00:00	22:10	49:00	73:10	96:00	%
100	0	0	0	0	0	0	0
75	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 05890110

TEST ELAPSED TIME
CONC. % 00:00 22:10 49:00 73:10 96:00

100	pH	7.3	7.8	7.8	7.8	7.8
	O2 ppm	9.2	10.2	9.8	10.0	9.9
	Cond.	238				230
	Temp(C)	15.0	15.0	15.0	15.0	15.0
75	pH	7.3	7.6	7.8	7.8	7.7
	O2 ppm	9.4	9.9	10.0	10.2	9.6
	Cond.	215				211
	Temp(C)	15.0	15.0	15.0	15.0	15.0
56	pH	7.4	7.6	7.8	7.8	7.7
	O2 ppm	9.4	10.2	10.0	10.4	9.7
	Cond.	205				200
	Temp(C)	15.0	15.0	15.0	15.0	15.0
25	pH	7.5	7.6	7.7	7.8	7.7
	O2 ppm	9.4	10.0	9.4	10.0	9.7
	Cond.	180				180
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.6	7.7	7.7	7.8	7.7
	O2 ppm	9.6	10.1	9.8	10.3	9.9
	Cond.	171				171
	Temp(C)	15.0	15.0	15.0	15.0	15.0
1	pH	7.8	7.7	7.7	7.8	7.7
	O2 ppm	9.4	10.0	9.9	10.2	10.0
	Cond.	165				168
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.2	7.6	7.7	7.7	7.8
	O2 ppm	9.9	10.0	9.5	9.5	9.9
	Cond.	165				165
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.2	7.8	7.8	7.8	7.9
	O2 ppm	9.8	10.2	9.8	10.2	10.2
	Cond.	165				162
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 05890126

TEST CONDITIONS

Company : Du Pont Canada Inc.
Corunna, ONT
(80309)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (200)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : P. Tymstra
Date Collected : 12/13/89
Received : 12/13/89
Tested : 12/13/89 at: 1700
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
	%	00:00	18:00	41:00	65:00	96:00
100	0	0	0	0	0	0
75	0	0	0	0	0	0
56	0	0	0	0	0	0
25	0	0	0	0	0	0
10	0	0	0	0	0	0
1	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890126

TEST CONC.	ELAPSED TIME				
%	00:00	18:00	41:00	65:00	96:00

100	pH	7.7	7.6	7.9	7.8	8.1
	O2 ppm	9.7	9.2	8.6	9.0	9.4
	Cond.	240				248
	Temp(C)	15.0	15.0	15.0	15.0	15.0
75	pH	7.7	7.6	7.9	7.8	8.0
	O2 ppm	10.0	9.2	9.0	9.2	9.2
	Cond.	222				228
	Temp(C)	15.0	15.0	15.0	15.0	15.0
56	pH	7.7	7.6	7.8	7.8	8.0
	O2 ppm	10.6	9.4	8.8	9.4	8.7
	Cond.	209				212
	Temp(C)	15.0	15.0	15.0	15.0	15.0
25	pH	7.7	7.6	7.8	7.8	8.1
	O2 ppm	11.2	9.4	9.1	9.4	9.0
	Cond.	189				194
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.7	7.5	7.9	7.8	8.2
	O2 ppm	11.2	9.4	9.0	9.6	9.2
	Cond.	167				182
	Temp(C)	15.0	15.0	15.0	15.0	15.0
1	pH	7.7	7.7	7.8	7.9	8.2
	O2 ppm	11.0	9.8	9.4	9.8	9.6
	Cond.	165				172
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.7	7.5	7.8	7.9	8.0
	O2 ppm	11.4	9.8	9.9	9.8	9.6
	Cond.	165				174
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.7	7.5	7.8	7.9	8.0
	O2 ppm	11.5	9.8	10.0	9.6	9.6
	Cond.	165				174
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 05900009

TEST CONDITIONS

Company : Du Pont Canada Inc.
Corunna, ONT
(80309)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (200)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : P.Tymstra
Date Collected : 01/10/90
Received : 01/10/90
Tested : 01/10/90 at: 1645
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	19:25	41:55	72:25	96:55	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	1	1	10

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900009

TEST CONC.	ELAPSED TIME				
%	00:00	19:25	41:55	72:25	96:55

100	pH	7.8	7.5	7.6	7.7	7.8
	O2 ppm	9.8	8.2	7.3	8.0	8.3
	Cond.	231				245
	Temp(C)	15.0	15.0	15.0	15.0	15.0
100	pH	7.8	7.5	7.6	7.8	7.8
	O2 ppm	9.9	8.4	7.9	8.4	8.6
	Cond.	238				245
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.5	7.6	7.6	7.8	7.7
	O2 ppm	11.2	9.2	8.4	9.3	8.9
	Cond.	170				185
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.5	7.5	7.6	7.7	7.7
	O2 ppm	11.0	9.0	8.2	8.6	8.7
	Cond.	175				185
	Temp(C)	15.0	15.0	15.0	15.0	15.0

MISA Trout

TOXICITY TEST REPORT

Sample: 05900036

TEST CONDITIONS

Company : Du Pont Canada Inc.
Corunna, ONT
(80309)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (200)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C. Ferguson
Date Collected : 02/14/90
Received : 02/14/90
Tested : 02/15/90 at: 1130
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	23:10	47:10	71:10	97:00	%
100	0	0	1	1	1	10
100	0	0	0	0	0	0
Control	0	0	0	0	1	10
Control	0	0	0	0	1	10

96 Hour LC50 : >100%
95% fid. limits : 0.0 - 0.0 %
Comments : 10% Control Mortalities - Valid by Protocol

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900036

TEST ELAPSED TIME
CONC. % 00:00 23:10 47:10 71:10 97:00

100	pH	7.7	7.6
	O2 ppm	9.3	8.9
	Cond.	220	230
	Temp(C)	15.0	15.0
100	pH	7.7	7.6
	O2 ppm	9.2	8.8
	Cond.	220	232
	Temp(C)	15.0	15.0
Control	pH	7.7	7.4
	O2 ppm	9.6	9.5
	Cond.	170	172
	Temp(C)	15.0	15.0
Control	pH	7.7	7.4
	O2 ppm	9.8	9.4
	Cond.	172	175
	Temp(C)	15.0	15.0

TOXICITY TEST REPORT

Sample: 01900016

TEST CONDITIONS

Company : Du Pont Canada Inc.
Corunna, ONT
(80309)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (200)
Laboratory : MOE
Sampling Method : Grab
Sampled By : Don Hamilton
Date Collected : 02/20/90
Received : 02/21/90
Tested : 02/22/90 at: 1400
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME										TOTAL MORTALITY
%	00:00	00:30	01:00	02:00	04:00	20:00	49:00	74:00	96:00	%	
100	0	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01900016

TEST CONC.	ELAPSED TIME									
%	00:00	00:30	01:00	02:00	04:00	20:00	49:00	74:00	96:00	
100	pH	7.1				7.4	7.5	7.6	7.	
	O2 ppm	10.0				9.3	10.9	10.5	10.	
	Cond.	260				215	270	270	26	
	Temp(C)	15.0				15.0	15.0	15.0	15.	
65	pH					7.6	7.4	7.5	7.	
	O2 ppm					10.4	10.8	10.4	10.	
	Cond.					270	275	270	27	
	Temp(C)					15.0	15.0	15.0	15.	
40	pH					7.5	7.4	7.5	7.	
	O2 ppm					10.1	10.5	10.3	10.	
	Cond.					270	275	275	27	
	Temp(C)					15.0	15.0	15.0	15.	
30	pH					7.8	7.3	7.5	7.	
	O2 ppm					10.0	10.5	10.0	10.	
	Cond.					270	275	275	27	
	Temp(C)					15.0	15.0	15.0	15.	
20	pH					7.6	7.4	7.6	7.	
	O2 ppm					10.5	10.8	10.5	10.	
	Cond.					270	275	275	27	
	Temp(C)					15.0	15.0	15.0	15.	
10	pH					7.6	7.4	7.4	7.	
	O2 ppm					10.5	10.8	10.5	10.	
	Cond.					270	275	275	27	
	Temp(C)					15.0	15.0	15.0	15.	
Control	pH					7.0	7.1	7.3	7.	
	O2 ppm					10.2	11.0	10.5	10.	
	Cond.					255	265	275	27	
	Temp(C)					15.0	15.0	15.0	15.	

MISA Trout

TOXICITY TEST REPORT

Sample: 05900055

TEST CONDITIONS

Company : Du Pont Canada Inc.
 Corunna, ONT
 (80309)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (200)
 Laboratory : Pollutech
 Sampling Method : Grab
 Sampled By : C.Ferguson
 Date Collected : 03/14/90
 Received : 03/14/90
 Tested : 03/15/90 at: 1130
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	25:25	48:10	71:10	97:10	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal
 95% fid. limits : 0.0 - 0.0 %
 Comments :

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900055

TEST CONC.	ELAPSED TIME				
%	00:00	25:25	48:10	71:10	97:10

100	pH	7.9	8.0
	O2 ppm	9.2	9.6
	Cond.	240	240
	Temp(C)	15.0	15.0
100	pH	8.0	8.0
	O2 ppm	9.2	9.0
	Cond.	245	242
	Temp(C)	15.0	15.0
Control	pH	7.5	7.7
	O2 ppm	10.8	9.1
	Cond.	168	180
	Temp(C)	15.0	15.0
Control	pH	7.6	7.7
	O2 ppm	10.7	9.0
	Cond.	168	180
	Temp(C)	15.0	15.0

TOXICITY TEST REPORT

Sample: 01900017

TEST CONDITIONS

Company : Du Pont Canada Inc.
Corunna, ONT
(80309)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (400)
Laboratory : MOE
Sampling Method : Grab
Sampled By : Don Hamilton
Date Collected : 02/20/90
Received : 02/21/90
Tested : 02/22/90 at: 1400
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME										TOTAL MORTALITY
%	00:00	00:30	01:00	02:00	04:00	20:30	49:30	74:00	92:00	%	
100	0	0	0	0	0	0	0	0	0	0	
65	0	0	0	0	0	0	0	0	0	0	
40	0	0	0	0	0	0	0	0	0	0	
30	0	0	0	0	0	0	0	0	0	0	
20	0	0	0	0	0	0	0	0	0	0	
10	0	0	0	0	0	0	0	0	0	0	
Control	0	0	0	0	0	0	0	0	0	0	

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01900017

TEST CONC. %	ELAPSED TIME									
	00:00	00:30	01:00	02:00	04:00	20:30	49:30	74:00	92:00	
100	pH	7.1					7.7	7.5	7.6	7.
	O2 ppm	9.6					10.4	9.8	10.0	10.
	Cond.	230					240	245	245	24
	Temp(C)	15.0					15.0	15.0	15.0	15.
65	pH						7.7	7.5	7.6	7.
	O2 ppm						10.6	9.9	10.0	10.
	Cond.						250	255	254	25
	Temp(C)						15.0	15.0	15.0	15.
40	pH						7.6	7.5	7.6	7.
	O2 ppm						10.2	9.8	10.0	10.
	Cond.						250	265	262	26
	Temp(C)						15.0	15.0	15.0	15.
30	pH						7.7	7.5	7.6	7.
	O2 ppm						10.7	10.0	10.0	10.
	Cond.						260	265	265	26
	Temp(C)						15.0	15.0	15.0	15.
20	pH						7.7	7.5	7.6	7.
	O2 ppm						10.7	10.0	10.2	10.
	Cond.						270	270	265	26
	Temp(C)						15.0	15.0	15.0	15.
10	pH						7.7	7.4	7.5	7.
	O2 ppm						10.3	9.8	10.0	10.
	Cond.						270	275	275	27
	Temp(C)						15.0	15.0	15.0	15.
Control	pH						7.5	7.3	7.2	7.
	O2 ppm						10.3	9.9	10.0	10.
	Cond.						265	265	275	27
	Temp(C)						15.0	15.0	15.0	15.

COMPANY: Du Pont Canada Inc., Corunna
(80309)
(now with St. Clair River Site)
SECTOR: Organic Chemical
REGION: Southwest

SUMMARY

Data for twelve *Daphnia magna* acute lethality toxicity test conducted on samples of intake water and combined effluent collected between October 1989 and March 1990 were submitted by Du Pont Canada Inc. of Corunna. Samples of intake water and effluent had little or no acute toxic effects on *Daphnia*.

Five of six samples of intake water were not acutely lethal to *Daphnia*. One sample had an LC50 > 100%.

Fifty percent of the effluent samples were nonlethal, and the remaining three samples had only one neonate die during the test.

Tests were conducted in the Ministry laboratory on samples collected in February from the effluent stream and from the pellet skimming pond. The combined effluent sample had an LC50 > 100%. The sample from the pellet skimming pond generated an unusual toxicity response in which most of the mortalities occurred in the middle (diluted) concentrations of effluent.

intake water

05890088 sampled: 10/18/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

05890111 sampled: 11/15/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05890127 sampled: 12/13/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900056 sampled: 03/14/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

combined effluent

05890089 sampled: 10/18/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

Du Pont Canada Inc. (continued)

05890110 sampled: 11/15/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

05890126 sampled: 12/13/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

02900016 sampled: 02/20/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

05900055 sampled: 03/14/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

combined effluent

02900017 sampled: 02/20/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit/bell-shaped lethality curve

rain gauge

TOXICITY TEST REPORT

Sample: 05890088

TEST CONDITIONS

Company : Du Pont Canada Inc.
Corunna, ONT
(80309)
Region : Southwest
Industry : Organic Chemical
Control point : intake water, (100)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C.Ferguson
Date Collected : 10/18/89
Received : 10/18/89
Tested : 10/18/89 at: 1345
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00	48:00	%
100	0	1	8
50	0	2	16
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890088

TEST CONC. %	ELAPSED TIME	
	00:00	48:00

100	pH	7.8	8.0
	O2 ppm	9.6	8.4
	Cond.	240	270
	Temp(C)	20.0	20.0
50	pH	8.0	8.1
	O2 ppm	9.4	8.4
	Cond.	365	389
	Temp(C)	20.0	20.0
26	pH	8.1	8.2
	O2 ppm	9.4	8.5
	Cond.	430	440
	Temp(C)	20.0	20.0
13	pH	8.1	8.2
	O2 ppm	9.3	8.5
	Cond.	468	459
	Temp(C)	20.0	20.0
6	pH	8.1	8.2
	O2 ppm	9.3	8.8
	Cond.	485	450
	Temp(C)	20.0	20.0
Control	pH	8.0	7.9
	O2 ppm	9.2	8.8
	Cond.	492	475
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05890111

TEST CONDITIONS

Company : Du Pont Canada Inc.
Corunna, ONT
(80309)
Region : Southwest
Industry : Organic Chemical
Control point : intake water, (100)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C. Ferguson
Date Collected : 11/15/89
Received : 11/15/89
Tested : 11/15/89 at: 1225
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00	48:00	%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890111

TEST CONC. %	ELAPSED TIME	
	00:00	48:00

100	pH	7.8	7.9
	O2 ppm	10.2	9.5
	Cond.	254	274
	Temp(C)	20.0	20.0
50	pH	8.0	8.1
	O2 ppm	9.6	9.4
	Cond.	392	381
	Temp(C)	20.0	20.0
26	pH	8.1	8.1
	O2 ppm	9.3	9.6
	Cond.	450	430
	Temp(C)	20.0	20.0
13	pH	8.1	8.1
	O2 ppm	9.2	9.4
	Cond.	478	460
	Temp(C)	20.0	20.0
6	pH	8.1	8.1
	O2 ppm	9.2	9.4
	Cond.	490	470
	Temp(C)	20.0	20.0
Control	pH	8.1	8.1
	O2 ppm	9.6	9.5
	Cond.	492	480
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05890127

TEST CONDITIONS

Company : Du Pont Canada Inc.
Corunna, ONT
(80309)
Region : Southwest
Industry : Organic Chemical
Control point : intake water, (100)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : P.Tymstra
Date Collected : 12/13/89
Received : 12/13/89
Tested : 12/13/89 at: 1415
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00	48:15	%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890127

TEST CONC.	ELAPSED TIME	
%	00:00	48:15

100	pH	7.8	8.0
	O2 ppm	9.4	9.4
	Cond.	282	282
	Temp(C)	20.0	20.0
50	pH	8.1	8.1
	O2 ppm	9.3	9.3
	Cond.	400	400
	Temp(C)	20.0	20.0
26	pH	8.3	8.3
	O2 ppm	9.4	9.4
	Cond.	449	449
	Temp(C)	20.0	20.0
13	pH	8.3	8.3
	O2 ppm	9.2	9.2
	Cond.	450	472
	Temp(C)	20.0	20.0
6	pH	8.1	8.3
	O2 ppm	9.0	9.1
	Cond.	460	488
	Temp(C)	20.0	20.0
Control	pH	8.1	8.2
	O2 ppm	9.4	9.3
	Cond.	488	495
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05900056

TEST CONDITIONS

Company : Du Pont Canada Inc.
Corunna, ONT
(80309)
Region : Southwest
Industry : Organic Chemical
Control point : intake water, (100)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C. Ferguson
Date Collected : 03/14/90
Received : 03/14/90
Tested : 03/14/90 at: 1220
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00 48:00		%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900056

TEST CONC.	ELAPSED TIME	
%	00:00 48:00	

100	pH	7.9	7.9
	O2 ppm	9.3	9.3
	Cond.	280	280
	Temp(C)	20.0	20.0
50	pH	8.0	8.0
	O2 ppm	9.1	9.1
	Cond.	405	405
	Temp(C)	20.0	20.0
26	pH	8.2	8.2
	O2 ppm	9.1	9.1
	Cond.	460	460
	Temp(C)	20.0	20.0
13	pH	8.3	8.3
	O2 ppm	9.3	9.3
	Cond.	488	488
	Temp(C)	20.0	20.0
6	pH	8.3	8.3
	O2 ppm	9.2	8.2
	Cond.	500	500
	Temp(C)	20.0	20.0
Control	pH	8.3	8.3
	O2 ppm	9.3	9.3
	Cond.	505	505
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05890089

TEST CONDITIONS

Company : Du Pont Canada Inc.
Corunna, ONT
(80309)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (200)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C.Ferguson
Date Collected : 10/18/89
Received : 10/18/89
Tested : 10/18/89 at: 1415
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY	
%	00:00	49:00	.	%
100	0	0		0
50	0	1		8
26	0	0		0
13	0	0		0
6	0	0		0
Control	0	0		0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890089

TEST CONC. %	ELAPSED TIME	
	00:00	49:00

100	pH	7.8	7.9
	O2 ppm	8.6	8.2
	Cond.	272	275
	Temp(C)	20.0	20.0
50	pH	9.1	8.1
	O2 ppm	9.0	9.0
	Cond.	430	380
	Temp(C)	20.0	20.0
26	pH	8.1	8.1
	O2 ppm	9.0	9.0
	Cond.	430	430
	Temp(C)	20.0	20.0
13	pH	8.2	8.2
	O2 ppm	9.2	9.2
	Cond.	470	470
	Temp(C)	20.0	20.0
6	pH	8.1	8.1
	O2 ppm	9.3	9.3
	Cond.	480	480
	Temp(C)	20.0	20.0
Control	pH	8.0	8.0
	O2 ppm	9.2	9.2
	Cond.	492	492
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05890110

TEST CONDITIONS

Company : Du Pont Canada Inc.
Corunna, ONT
(80309)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (200)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C.Ferguson
Date Collected : 11/15/89
Received : 11/15/89
Tested : 11/15/89 at: 1200
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E		TOTAL MORTALITY
%	00:00 48:20		%
100	0	0	0
50	0	0	0
26	0	1	8
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890110

TEST CONC. %	E L A P S E D T I M E	
	00:00 48:20	

100	pH	7.8	7.9
	O2 ppm	8.1	9.3
	Cond.	276	270
	Temp(C)	20.0	20.0
50	pH	8.0	8.0
	O2 ppm	8.8	9.4
	Cond.	346	382
	Temp(C)	20.0	20.0
26	pH	8.1	8.1
	O2 ppm	9.0	9.4
	Cond.	450	432
	Temp(C)	20.0	20.0
13	pH	8.1	8.1
	O2 ppm	9.0	9.4
	Cond.	476	454
	Temp(C)	20.0	20.0
6	pH	8.1	8.1
	O2 ppm	9.1	9.6
	Cond.	488	470
	Temp(C)	20.0	20.0
Control	pH	8.1	8.1
	O2 ppm	9.6	9.6
	Cond.	492	480
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05890126

TEST CONDITIONS

Company : Du Pont Canada Inc.
Corunna, ONT
(80309)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (200)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : P. Tymstra
Date Collected : 12/13/89
Received : 12/13/89
Tested : 12/13/89 at: 1440
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00 48:30		%
100	0	0	0
50	0	0	0
26	0	1	8
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : >100%
95% fid. limits : 0.0 - 0.0 %
Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890126

TEST CONC.	ELAPSED TIME	
%	00:00 48:30	

100	pH	8.0	8.0
	O2 ppm	9.0	8.6
	Cond.	270	285
	Temp(C)	20.0	20.0
50	pH	8.1	8.1
	O2 ppm	9.0	8.9
	Cond.	384	402
	Temp(C)	20.0	20.0
26	pH	8.1	8.3
	O2 ppm	9.0	9.2
	Cond.	438	450
	Temp(C)	20.0	20.0
13	pH	8.1	8.3
	O2 ppm	9.0	9.3
	Cond.	460	470
	Temp(C)	20.0	20.0
6	pH	8.1	8.3
	O2 ppm	9.0	9.3
	Cond.	470	482
	Temp(C)	20.0	20.0
Control	pH	8.1	8.2
	O2 ppm	9.4	9.3
	Cond.	488	495
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 02900016

TEST CONDITIONS

Company : Du Pont Canada Inc.
Corunna, ONT
(80309)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (200)
Laboratory : MOE
Sampling Method : Grab
Sampled By : D. Hamilton
Date Collected : 02/20/90
Received : 02/20/90
Tested : 02/20/90 at: 1410
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	01:00	24:00	48:00	%
100	0	0	1	1	8
60	0	0	1	0	0
30	0	0	0	0	0
15	0	0	0	0	0
5	0	1	1	1	8
Control	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
LC50 Calculated By : None

TOXICITY TEST PARAMETERS

Sample Number: 02900016

TEST CONC.	ELAPSED TIME			
%	00:00	01:00	24:00	48:00
100	pH 7.6			7.9
	O2 ppm 9.4			8.0
	Cond. 327			330
	Temp(C) 20.0	20.0	20.0	20.0
60	pH 7.8			7.9
	O2 ppm 9.4			8.1
	Cond. 325			325
	Temp(C) 20.0	20.0	20.0	20.0
30	pH 7.8			8.0
	O2 ppm 9.3			8.2
	Cond. 320			319
	Temp(C) 20.0	20.0	20.0	20.0
15	pH 7.9			8.0
	O2 ppm 9.4			8.3
	Cond. 318			320
	Temp(C) 20.0	20.0	20.0	20.0
5	pH 7.8			8.0
	O2 ppm 9.3			8.3
	Cond. 316			321
	Temp(C) 20.0	20.0	20.0	20.0
Control	pH 7.8			8.0
	O2 ppm 9.2			8.3
	Cond. 305			309
	Temp(C) 20.0	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 05900055

TEST CONDITIONS

Company : Du Pont Canada Inc.
Corunna, ONT
(80309)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (200)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C. Ferguson
Date Collected : 03/14/90
Received : 03/14/90
Tested : 03/14/90 at: 1240
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00	48:00	%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900055

TEST CONC. %	ELAPSED TIME	
	00:00	48:00

100	pH	8.0	8.0
	O2 ppm	9.0	8.3
	Cond.	280	290
	Temp(C)	20.0	20.0
50	pH	8.2	8.1
	O2 ppm	8.8	8.4
	Cond.	420	418
	Temp(C)	20.0	20.0
26	pH	8.3	8.2
	O2 ppm	8.8	8.8
	Cond.	470	465
	Temp(C)	20.0	20.0
13	pH	8.3	8.3
	O2 ppm	8.8	9.0
	Cond.	500	490
	Temp(C)	20.0	20.0
6	pH	8.3	8.3
	O2 ppm	8.8	9.2
	Cond.	520	500
	Temp(C)	20.0	20.0
Control	pH	8.4	8.3
	O2 ppm	8.8	9.2
	Cond.	520	510
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 02900017

TEST CONDITIONS

Company : Du Pont Canada Inc.
Corunna, ONT
(80309)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (400)
Laboratory : MOE
Sampling Method : Grab
Sampled By : D. Hamilton
Date Collected : 02/20/90
Received : 02/20/90
Tested : 02/20/90 at: 1502
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E				TOTAL MORTALITY %
	%	00:00	01:00	24:00	48:00
100	0	0	1	1	8
60	0	0	2	5	41
30	0	0	1	4	33
15	0	0	2	4	33
5	0	0	0	0	0
Control	0	1	1	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit/bell-shaped lethality curve

SLOPE of Mortality Curve :
LC50 Calculated By : None

TOXICITY TEST PARAMETERS

Sample Number: 02900017

TEST CONC. %	E L A P S E D T I M E			
		00:00	01:00	24:00 48:00
100	pH	7.7		7.9
	O2 ppm	9.2		8.2
	Cond.	291		295
	Temp(C)	20.0	20.0	20.0 20.0
60	pH	7.8		8.0
	O2 ppm	9.3		8.3
	Cond.	303		304
	Temp(C)	20.0	20.0	20.0 20.0
30	pH	7.9		8.0
	O2 ppm	9.3		8.3
	Cond.	310		310
	Temp(C)	20.0	20.0	20.0 20.0
15	pH	7.9		8.0
	O2 ppm	9.3		8.2
	Cond.	312		314
	Temp(C)	20.0	20.0	20.0 20.0
5	pH	7.9		7.9
	O2 ppm	9.3		8.3
	Cond.	314		314
	Temp(C)	20.0	20.0	20.0 20.0
Control	pH	7.9		7.8
	O2 ppm	9.2		8.3
	Cond.	305		307
	Temp(C)	20.0	20.0	20.0 20.0

COMPANY: Du Pont Canada Inc., Kingston
(80101)
SECTOR: Organic Chemical
REGION: Southeast

SUMMARY

The data for twelve trout bioassays, conducted on combined effluent samples collected between October 1989 and March 1990, were provided by Du Pont Canada Incorporated. Three of the six samples collected from combined effluent (control point 0700) were determined to have been acutely lethal to test fish. Statistically, the percentage effluent to kill 50 % of the test fish by the end of four days exposure, for each sample, were 81.0 % (October), 64.3 % (December), and 86.4 % (February). The other three samples were determined to have been non-acutely lethal.

Three of the six samples collected from the combined effluent (control point 1100) were determined to have been acutely lethal to test fish. Statistically, the percentage effluent to kill 50 % of the test fish by the end of four days exposure, for each sample, were 51.0 % (October), 42.7 % (December) and 56.8 % (February). One sample 96 hour LC50 was > 100 % and the other two samples were determined to have been non-acutely lethal. An audit sample collected from combined effluent (control point 1100) was tested by O.M.E. laboratory and its 96 hour LC50 was > 100 %.

process effluent

combined effluent

03890228 sampled: 10/17/89 LC50: 81.0 %
95% fid. limits: 65.0 - 100.0 %
comments:

03890277 sampled: 11/14/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03890392 sampled: 12/19/89 LC50: 64.3 %
95% fid. limits: 48.6 - 84.9 % slope: 4.3
comments:

03900048 sampled: 01/16/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900146 sampled: 02/20/90 LC50: 86.4 %
95% fid. limits: 76.1 - 98.1 % slope: 13.3
comments:

Du Pont Canada Inc. (continued)

03900234 sampled: 03/20/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

waste site

process effluent

combined effluent

03890229 sampled: 10/17/89 LC50: 51.0 %
95% fid. limits: 40.0 - 65.0 %
comments:

03890278 sampled: 11/14/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03890393 sampled: 12/19/89 LC50: 42.7 %
95% fid. limits: 33.9 - 53.7 % slope: 6.1
comments:

03900047 sampled: 01/16/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900145 sampled: 02/20/90 LC50: 56.8 %
95% fid. limits: 47.6 - 67.7 % slope: 8.4
comments:

01900023 sampled: 02/26/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

03900235 sampled: 03/20/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50>100

rain gauge

intake water

TOXICITY TEST REPORT

Sample: 03890228

TEST CONDITIONS

Company : Du Pont Canada Inc.
Kingston, ONT
(80101)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (700)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Dickson
Date Collected : 10/17/89
Received : 10/20/89
Tested : 10/20/89 at: 1400
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	4	10	10	10	100

96 Hour LC50 : 81.0 %

95% fid. limits : 65.0 - 100.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : Geometric Mean

TOXICITY TEST PARAMETERS

Sample Number: 03890228

TEST ELAPSED TIME
CONC. % 00:00 04:00 24:00 48:00 72:00 96:00

Control	pH	7.7					8.4
	O2 ppm	8.7					9.2
	Cond.	573					547
	Temp(C)	14.0	14.5	14.0	15.0	15.5	15.5
10	pH	7.7					8.4
	O2 ppm	8.7					9.2
	Cond.	551					542
	Temp(C)	14.0	14.5	14.0	15.0	15.5	15.5
20	pH	7.7					8.4
	O2 ppm	8.8					9.1
	Cond.	530					526
	Temp(C)	14.0	14.5	14.0	15.0	15.5	15.5
40	pH	7.7					8.3
	O2 ppm	8.9					9.1
	Cond.	485					489
	Temp(C)	14.0	14.5	14.0	15.0	15.5	15.5
65	pH	7.6					8.2
	O2 ppm	9.3					9.1
	Cond.	445					439
	Temp(C)	14.0	14.5	14.0	15.0	15.5	15.5
100	pH	7.6			7.6		
	O2 ppm	9.9			8.8		
	Cond.	366			368		
	Temp(C)	14.0	14.5	14.0	15.0		

TOXICITY TEST REPORT

Sample: 03890277

TEST CONDITIONS

Company : Du Pont Canada Inc.
 Kingston, ONT
 (80101)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (700)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. Dickson
 Date Collected : 11/14/89
 Received : 11/17/89
 Tested : 11/18/89 at: 1030
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E						TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890277

TEST CONC. %	E L A P S E D T I M E					
	00:00	04:00	24:00	48:00	72:00	96:00
Control	pH 7.9					8.6
	O2 ppm 8.8					11.0
	Cond. 560					541
	Temp(C) 14.0	15.0	14.0	15.0	14.0	14.0
10	pH 7.9					8.5
	O2 ppm 9.1					10.8
	Cond. 538					529
	Temp(C) 14.0	15.0	14.0	15.0	14.0	14.0
20	pH 7.9					8.6
	O2 ppm 9.2					10.9
	Cond. 521					510
	Temp(C) 14.0	15.0	14.0	15.0	14.0	14.0
40	pH 8.0					8.5
	O2 ppm 9.4					10.9
	Cond. 482					477
	Temp(C) 14.0	15.0	14.0	15.0	14.0	14.0
65	pH 8.0					8.4
	O2 ppm 9.7					10.9
	Cond. 432					429
	Temp(C) 14.0	15.0	14.0	15.0	14.0	14.0
100	pH 8.3					8.2
	O2 ppm 10.0					11.0
	Cond. 348					360
	Temp(C) 14.0	15.0	14.0	15.0	14.0	14.0

TOXICITY TEST REPORT

Sample: 03890392

TEST CONDITIONS

Company : Du Pont Canada Inc.
Kingston, ONT
(80101)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (700)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Dickson
Date Collected : 12/19/89
Received : 12/22/89
Tested : 12/23/89 at: 1415
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY %
	%	00:00	24:00	48:00	72:00	96:00
100	0	7	10	10	10	100
65	0	0	4	4	4	40
40	0	0	0	1	1	10
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : 64.3 %

95% fid. limits : 48.6 - 84.9 %

Comments :

SLOPE of Mortality Curve : 4.3
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 03890392

TEST CONC. %	ELAPSED TIME				
	00:00	24:00	48:00	72:00	96:00

100	pH	8.0	8.2		
	O2 ppm	10.8	9.8		
	Cond.	350	346		
	Temp(C)	15.0	14.0	14.0	14.5
65	pH	7.9			8.3
	O2 ppm	10.4			9.8
	Cond.	421			423
	Temp(C)	15.0	14.0	14.0	14.5
40	pH	7.8			8.5
	O2 ppm	9.8			9.9
	Cond.	472			468
	Temp(C)	15.0	14.0	14.0	14.5
20	pH	7.8			8.5
	O2 ppm	9.6			9.6
	Cond.	510			507
	Temp(C)	15.0	14.0	14.0	14.5
10	pH	7.8			8.5
	O2 ppm	9.4			9.6
	Cond.	531			528
	Temp(C)	15.0	14.0	14.0	14.5
5	pH	7.8			8.5
	O2 ppm	9.3			9.5
	Cond.	543			549
	Temp(C)	15.0	14.0	14.0	14.5
Control	pH	7.9			8.5
	O2 ppm	9.3			9.8
	Cond.	552			553
	Temp(C)	15.0	14.0	14.0	14.5

TOXICITY TEST REPORT

Sample: 03900048

TEST CONDITIONS

Company : Du Pont Canada Inc.
Kingston, ONT
(80101)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (700)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Dickson
Date Collected : 01/16/90
Received : 01/19/90
Tested : 01/19/90 at: 1500
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900048

TEST CONC.	ELAPSED TIME				
%	00:00	24:00	48:00	72:00	96:00

100	pH	8.0			8.1
	O2 ppm	10.3			9.1
	Cond.	370			380
	Temp(C)	14.5	14.0	14.0	14.0
65	pH	7.9			8.3
	O2 ppm	9.9			9.3
	Cond.	380			443
	Temp(C)	14.5	14.0	14.0	14.0
40	pH	7.9			8.4
	O2 ppm	9.4			9.4
	Cond.	395			482
	Temp(C)	14.5	14.0	14.0	14.0
20	pH	7.9			8.5
	O2 ppm	9.3			9.3
	Cond.	497			512
	Temp(C)	14.5	14.0	14.0	14.0
10	pH	7.9			8.5
	O2 ppm	9.3			9.2
	Cond.	517			521
	Temp(C)	14.5	14.0	14.0	14.0
5	pH	7.9			8.5
	O2 ppm	9.1			9.1
	Cond.	533			528
	Temp(C)	14.5	14.0	14.0	14.0
Control	pH	7.9			8.5
	O2 ppm	8.7			9.6
	Cond.	546			509
	Temp(C)	14.5	14.0	14.0	14.0

TOXICITY TEST REPORT

Sample: 03900146

TEST CONDITIONS

Company : Du Pont Canada Inc.
Kingston, ONT
(80101)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (700)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Dickson
Date Collected : 02/20/90
Received : 02/23/90
Tested : 02/23/90 at: 1600
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY %
	%	00:00	18:30	24:00	48:00	72:00	96:00
100	0	7	7	8	8	8	80
65	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

96 Hour LC50 : 86.4 %

95% fid. limits : 76.1 - 98.1 %

Comments :

SLOPE of Mortality Curve : 13.3
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 03900146

TEST CONC. %	ELAPSED TIME						
		00:00	18:30	24:00	48:00	72:00	96:00
100	pH	10.2	9.7				
	O2 ppm	10.1	10.0				
	Cond.	447	438				
	Temp(C)	16.0	14.5	14.5	14.0	14.0	15.0
65	pH	9.1					8.2
	O2 ppm	9.9					9.3
	Cond.	475					437
	Temp(C)	16.0	14.5	14.5	14.0	14.0	15.0
40	pH	8.7					8.3
	O2 ppm	9.0					9.5
	Cond.	483					486
	Temp(C)	15.0	14.5	14.5	14.0	14.0	15.0
20	pH	8.4					8.3
	O2 ppm	8.6					9.2
	Cond.	519					521
	Temp(C)	15.0	14.5	14.5	14.0	14.0	15.0
10	pH	8.1					8.4
	O2 ppm	8.4					9.5
	Cond.	534					528
	Temp(C)	15.0	14.5	14.5	14.0	14.0	15.0
5	pH	8.0					8.5
	O2 ppm	8.2					9.6
	Cond.	536					525
	Temp(C)	15.0	14.5	14.5	14.0	14.0	15.0
Control	pH	7.9					8.6
	O2 ppm	8.1					10.0
	Cond.	542					530
	Temp(C)	15.0	14.5	14.5	14.0	14.0	15.0

TOXICITY TEST REPORT

Sample: 03900234

TEST CONDITIONS

Company : Du Pont Canada Inc.
 Kingston, ONT
 (80101)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (700)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. Dickson
 Date Collected : 03/20/90
 Received : 03/23/90
 Tested : 03/23/90 at: 1345
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900234

TEST CONC. %	ELAPSED TIME				
	00:00	24:00	48:00	72:00	96:00

100	pH	8.3				8.1
	O2 ppm	10.5				9.8
	Cond.	340				365
	Temp(C)	15.0	14.5	14.5	14.0	15.0
65	pH	8.1				8.3
	O2 ppm	9.8				9.8
	Cond.	411				429
	Temp(C)	15.0	14.5	14.5	14.0	15.0
40	pH	8.0				8.4
	O2 ppm	9.7				9.9
	Cond.	473				470
	Temp(C)	15.0	14.5	14.5	14.0	15.0
20	pH	7.9				8.4
	O2 ppm	9.2				9.9
	Cond.	506				505
	Temp(C)	15.0	14.5	14.5	14.0	15.0
10	pH	7.9				8.5
	O2 ppm	8.9				9.0
	Cond.	526				519
	Temp(C)	15.0	14.5	14.5	14.0	15.0
5	pH	7.9				8.4
	O2 ppm	8.7				9.8
	Cond.	533				530
	Temp(C)	15.0	14.5	14.5	14.0	15.0
Control	pH	7.9				8.5
	O2 ppm	8.5				8.0
	Cond.	541				540
	Temp(C)	15.0	14.5	14.5	14.0	15.0

TOXICITY TEST REPORT

Sample: 03890229

TEST CONDITIONS

Company : Du Pont Canada Inc.
Kingston, ONT
(80101)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (1100)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Dickson
Date Collected : 10/17/89
Received : 10/20/89
Tested : 10/20/89 at: 1400
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	6	7	10	10	100
100	0	0	10	10	10	10	100

96 Hour LC50 : 51.0 %

95% fid. limits : 40.0 - 65.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : Geometric Mean

TOXICITY TEST PARAMETERS

Sample Number: 03890229

TEST ELAPSED TIME
CONC. %
00:00 04:00 24:00 48:00 72:00 96:00

Control	pH	7.8					8.4
	O2 ppm	8.5					9.1
	Cond.	573					565
	Temp(C)	14.0	14.5	15.0	15.0	15.5	15.0
10	pH	7.8					8.4
	O2 ppm	8.5					9.1
	Cond.	547					538
	Temp(C)	14.0	14.5	15.0	15.0	15.5	15.0
20	pH	7.8					8.4
	O2 ppm	8.6					9.0
	Cond.	523					525
	Temp(C)	14.0	14.5	15.0	15.0	15.5	15.0
40	pH	7.8					8.4
	O2 ppm	9.0					9.1
	Cond.	475					484
	Temp(C)	14.0	14.5	15.0	15.0	15.5	15.0
65	pH	7.9			8.2		
	O2 ppm	9.2			9.2		
	Cond.	420			428		
	Temp(C)	14.0	14.5	15.0	15.0		
100	pH	8.2			8.2		
	O2 ppm	9.9			9.4		
	Cond.	350			352		
	Temp(C)	14.0	14.5	15.0			

TOXICITY TEST REPORT

Sample: 03890278

TEST CONDITIONS

Company : Du Pont Canada Inc.
Kingston, ONT
(80101)
Region : Southeast
Industry : Organic Chemical

Control point : combined effluent, (1100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Dickson
Date Collected : 11/14/89
Received : 11/17/89
Tested : 11/18/89 at: 1030

Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	1	10
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890278

TEST CONC. %	ELAPSED TIME					
	00:00	04:00	24:00	48:00	72:00	96:00
Control	pH 7.9					8.6
	O2 ppm 8.4					10.9
	Cond. 560					548
	Temp(C) 14.0	15.0	14.0	15.0	14.0	14.0
10	pH 7.9					8.6
	O2 ppm 9.3					10.0
	Cond. 543					536
	Temp(C) 14.0	15.0	14.0	15.0	14.0	14.0
20	pH 7.9					8.6
	O2 ppm 9.4					9.8
	Cond. 520					518
	Temp(C) 14.0	15.0	14.0	15.0	14.0	14.0
40	pH 7.9					8.5
	O2 ppm 9.6					9.7
	Cond. 482					480
	Temp(C) 14.0	15.0	14.0	15.0	14.0	14.0
65	pH 8.0					8.2
	O2 ppm 9.8					9.1
	Cond. 434					440
	Temp(C) 14.0	15.0	14.0	15.0	14.0	14.0
100	pH 8.1					8.1
	O2 ppm 10.2					9.6
	Cond. 360					376
	Temp(C) 14.0	15.0	14.0	15.0	14.0	14.0

TOXICITY TEST REPORT

Sample: 03890393

TEST CONDITIONS

Company : Du Pont Canada Inc.
Kingston, ONT
(80101)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (1100)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Dickson
Date Collected : 12/19/89
Received : 12/22/89
Tested : 12/23/89 at: 1430
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	10	10	10	10	100
65	0	8	10	10	10	100
40	0	0	3	3	3	30
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : 42.7 %

95% fid. limits : 33.9 - 53.7 %

Comments :

TOXICITY TEST PARAMETERS

Sample Number: 03890393

TEST CONC. %	ELAPSED TIME				
	00:00	24:00	48:00	72:00	96:00
100	pH 8.1	8.5			
	O2 ppm 10.5	9.6			
	Cond. 348	349			
	Temp(C) 15.0	14.0			
65	pH 7.9	8.4			
	O2 ppm 9.6	9.5			
	Cond. 423	430			
	Temp(C) 15.0	14.0	14.0		
40	pH 7.8				8.4
	O2 ppm 9.1				9.3
	Cond. 473				478
	Temp(C) 15.0	14.0	14.0	14.0	14.0
20	pH 7.8				8.5
	O2 ppm 9.0				9.4
	Cond. 513				512
	Temp(C) 15.0	14.0	14.0	14.0	14.0
10	pH 7.8				8.4
	O2 ppm 8.9				9.4
	Cond. 531				531
	Temp(C) 15.0	14.0	14.0	14.0	14.0
5	pH 7.8				8.4
	O2 ppm 8.8				9.2
	Cond. 539				543
	Temp(C) 15.0	14.0	14.0	14.0	14.0
Control	pH 7.8				8.4
	O2 ppm 8.9				9.3
	Cond. 550				558
	Temp(C) 15.0	14.0	14.0	14.0	14.0

TOXICITY TEST REPORT

Sample: 03900047

TEST CONDITIONS

Company : Du Pont Canada Inc.
 Kingston, ONT
 (80101)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (1100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. Dickson
 Date Collected : 01/16/90
 Received : 01/19/90
 Tested : 01/19/90 at: 1500
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900047

TEST CONC. %	ELAPSED TIME				
	00:00	24:00	48:00	72:00	96:00
100	pH 8.0				8.1
	O2 ppm 9.6				9.1
	Cond. 338				359
	Temp(C) 16.0	14.0	14.0	14.0	14.0
65	pH 7.9				8.3
	O2 ppm 9.1				9.3
	Cond. 410				421
	Temp(C) 16.0	14.0	14.0	14.0	14.0
40	pH 7.9				8.4
	O2 ppm 8.8				9.3
	Cond. 464				473
	Temp(C) 16.0	14.0	14.0	14.0	14.0
20	pH 7.9				8.5
	O2 ppm 8.6				9.3
	Cond. 504				504
	Temp(C) 16.0	14.0	14.0	14.0	14.0
10	pH 7.9				8.5
	O2 ppm 8.5				8.9
	Cond. 526				516
	Temp(C) 16.0	14.0	14.0	14.0	14.0
5	pH 7.9				8.5
	O2 ppm 8.4				9.2
	Cond. 530				516
	Temp(C) 16.0	14.0	14.0	14.0	14.0
Control	pH 7.9				8.5
	O2 ppm 8.1				8.1
	Cond. 534				524
	Temp(C) 16.0	14.0	14.0	14.0	14.0

MISA Trout

TOXICITY TEST REPORT

Sample: 03900145

TEST CONDITIONS

Company : Du Pont Canada Inc.
Kingston, ONT
(80101)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (1100)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Dickson
Date Collected : 02/20/90
Received : 02/23/90
Tested : 02/23/90 at: 1600
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
	%	00:00	04:00	24:00	48:00	72:00	96:00
100	0	10	10	10	10	10	100
65	0	0	6	7	8	8	80
40	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

96 Hour LC50 : 56.8 %

95% fid. limits : 47.6 - 67.7 %

Comments :

SLOPE of Mortality Curve : 8.4
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 03900145

TEST CONC. %	ELAPSED TIME						
		00:00	04:00	24:00	48:00	72:00	96:00
100	pH	11.2	11.2				
	O2 ppm	10.2	10.2				
	Cond.	877	877				
	Temp(C)	15.0	14.5				
65	pH	10.0		9.8			
	O2 ppm	10.2		9.8			
	Cond.	611		604			
	Temp(C)	15.0	14.5	14.5	14.0	14.0	14.5
40	pH	9.5					8.2
	O2 ppm	10.0					8.9
	Cond.	590					548
	Temp(C)	15.0	14.5	14.5	14.0	14.0	14.5
20	pH	8.8					8.2
	O2 ppm	9.7					9.3
	Cond.	547					539
	Temp(C)	15.0	14.5	14.5	14.0	14.0	14.5
10	pH	8.4					8.4
	O2 ppm	9.5					9.7
	Cond.	553					532
	Temp(C)	15.0	14.5	14.5	14.0	14.0	14.5
5	pH	8.2					8.4
	O2 ppm	9.4					9.6
	Cond.	551					536
	Temp(C)	15.0	14.5	14.5	14.0	14.0	14.5
Control	pH	7.8					8.4
	O2 ppm	9.1					9.5
	Cond.	548					540
	Temp(C)	15.0	14.5	14.5	14.0	14.0	14.5

TOXICITY TEST REPORT

Sample: 01900023

TEST CONDITIONS

Company : Du Pont Canada Inc.
Kingston, ONT
(80101)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (1100)
Laboratory : MOE
Sampling Method : Grab
Sampled By : A. Verbaas
Date Collected : 02/26/90
Received : 02/28/90
Tested : 03/01/90 at: 1300
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME								TOTAL MORTALITY
%	00:00	00:30	01:00	02:00	21:00	46:00	71:00	96:00	%
100	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	1	1	1	10
20	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01900023

TEST CONC. %	ELAPSED TIME							
	00:00	00:30	01:00	02:00	21:00	46:00	71:00	96:00
100	pH	8.6		8.9	7.6	7.7	7.7	7.7
	O2 ppm	10.1		10.6	9.9	10.0	10.1	10.8
	Cond.	270		295	285	285	285	290
	Temp(C)	15.0		15.0	15.0	15.0	15.0	15.0
65	pH			8.6	7.6	7.6	7.7	7.6
	O2 ppm			10.6	10.1	10.0	10.2	10.8
	Cond.			285	275	280	280	285
	Temp(C)			15.0	15.0	15.0	15.0	15.0
40	pH			8.3	7.5	7.5	7.5	7.5
	O2 ppm			10.5	10.0	9.8	10.0	10.6
	Cond.			280	270	275	275	280
	Temp(C)			15.0	15.0	15.0	15.0	15.0
30	pH			8.1	7.4	7.3	7.4	7.4
	O2 ppm			10.5	9.8	9.7	9.8	10.5
	Cond.			275	270	275	275	275
	Temp(C)			15.0	15.0	15.0	15.0	15.0
20	pH			7.8	7.6	7.6	7.6	7.5
	O2 ppm			10.5	10.3	10.2	10.3	11.0
	Cond.			275	265	270	270	270
	Temp(C)			15.0	15.0	15.0	15.0	15.0
10	pH			7.5	7.5	7.5	7.5	7.5
	O2 ppm			10.4	10.2	10.2	10.3	10.8
	Cond.			270	265	270	265	275
	Temp(C)			15.0	15.0	15.0	15.0	15.0
Control	pH			7.3	7.3	7.1	7.2	7.5
	O2 ppm			10.3	10.1	10.1	10.2	10.7
	Cond.			250	265	265	260	270
	Temp(C)			15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 03900235

TEST CONDITIONS

Company : Du Pont Canada Inc.
Kingston, ONT
(80101)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (1100)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Dickson
Date Collected : 03/20/90
Received : 03/23/90
Tested : 03/23/90 at: 1340
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	1	10
Control	0	0	0	0	0	0

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50>100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900235

TEST E L A P S E D T I M E
CONC. % 00:00 24:00 48:00 72:00 96:00

100	pH	8.2				7.9
	O2 ppm	10.5				9.1
	Cond.	349				363
	Temp(C)	15.0	14.5	14.5	14.0	15.0
65	pH	8.1				8.2
	O2 ppm	10.1				9.4
	Cond.	411				431
	Temp(C)	15.0	14.5	14.5	14.0	15.0
40	pH	8.0				8.3
	O2 ppm	9.9				9.4
	Cond.	459				468
	Temp(C)	15.0	14.5	14.5	14.0	15.0
20	pH	7.9				8.4
	O2 ppm	9.7				9.6
	Cond.	495				503
	Temp(C)	15.0	14.5	14.5	14.0	15.0
10	pH	7.9				8.4
	O2 ppm	9.5				9.7
	Cond.	510				520
	Temp(C)	15.0	14.5	14.5	14.0	15.0
5	pH	7.9				8.5
	O2 ppm	9.4				9.9
	Cond.	530				530
	Temp(C)	15.0	14.5	14.5	14.0	15.0
Control	pH	8.0				8.4
	O2 ppm	9.4				9.5
	Cond.	540				525
	Temp(C)	15.0	14.5	14.5	14.0	15.0

COMPANY: Du Pont Canada Inc., Kingston
(80101)
(now with Kingston Site)
SECTOR: Organic Chemical
REGION: Southeast

SUMMARY

Data for twelve *Daphnia magna* acute lethality toxicity tests were conducted on samples of combined effluent collected between October 1989 and March 1990 were submitted by DuPont Canada Inc. of Kingston. Toxicity was variable for both outfalls.

All six samples from combined effluent #700 were lethal to *Daphnia*. Toxicity ranged from a sample in which only one animal died, to a sample collected in December with an LC50 = 12.7%.

Two of six samples from combined effluent pipe #1100 were not acutely lethal to *Daphnia*. Toxicity in the remaining 4 samples ranged from the November sample in which only one animal died in the test, to a sample collected in December which generated an LC50 = 8.0%.

Audit tests were conducted in the Ministry laboratory on samples collected in February from both outfalls. The sample from combined effluent #700 was toxic to *Daphnia* with a 48 h LC50 of 70.0%. The sample from combined effluent #1100 was nonlethal.

process effluent

combined effluent

03890228 sampled: 10/17/89 LC50: 18.9 %
95% fid. limits: 14.3 - 24.7 % slope: 5.1
comments:

03890277 sampled: 11/14/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03890392 sampled: 12/19/89 LC50: 12.7 %
95% fid. limits: 10.0 - 16.0 % slope: 5.6
comments:

03900048 sampled: 01/16/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 > 100

03900146 sampled: 02/20/90 LC50: 39.3 %
95% fid. limits: 29.9 - 51.4 % slope: 5.8
comments:

Du Pont Canada Inc. (continued)

02900021 sampled: 02/26/90 LC50: 70.0 %
95% fid. limits: 61.5 - 79.6 %
comments: MISA Audit/high biological oxygen demand

03900234 sampled: 03/20/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

waste site

process effluent

combined effluent

03890229 sampled: 10/17/89 LC50: 16.2 %
95% fid. limits: 12.1 - 21.6 % slope: 5.4
comments:

03890278 sampled: 11/14/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03890393 sampled: 12/19/89 LC50: 8.0 %
95% fid. limits: 5.3 - 12.0 % slope: 2.5
comments:

03900047 sampled: 01/16/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900145 sampled: 02/20/90 LC50: 35.3 %
95% fid. limits: 25.0 - 50.0 %
comments:

02900023 sampled: 02/26/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

03900235 sampled: 03/20/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

rain gauge

intake water

Du Pont Canada Inc. (continued)

TOXICITY TEST REPORT

Sample: 03890228

TEST CONDITIONS

Company : Du Pont Canada Inc.
Kingston, ONT
(80101)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (700)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Dickson
Date Collected : 10/17/89
Received : 10/20/89
Tested : 10/20/89 at: 1040
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY %
	%	00:00	02:00	04:00	24:00 48:00	
Control	0	0	0	0	1	8
6	0	0	0	0	0	0
13	0	0	0	3	3	25
25	0	0	0	7	8	66
50	0	0	0	12	12	100
100	0	10	11	12	12	100

48 Hour LC50 : 18.9 %

95% fid. limits : 14.3 - 24.7 %

Comments : .

SLOPE of Mortality Curve : 5.1
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 03890228

TEST CONC. %	ELAPSED TIME				
	00:00	02:00	04:00	24:00	48:00

Control	pH	8.4			8.4
	O2 ppm	8.9			8.9
	Cond.	310			294
	Temp(C)	20.0	20.0	20.0	19.5 19.0
6	pH	8.3			8.4
	O2 ppm	8.9			8.9
	Cond.	318			308
	Temp(C)	20.0	20.0	20.0	19.5 19.0
13	pH	8.3			8.4
	O2 ppm	8.9			9.0
	Cond.	318			311
	Temp(C)	20.0	20.0	20.0	19.5 19.0
25	pH	8.2			8.3
	O2 ppm	9.0			9.0
	Cond.	322			314
	Temp(C)	20.0	20.0	20.0	19.5 19.0
50	pH	8.0			8.2
	O2 ppm	9.3			9.9
	Cond.	332			329
	Temp(C)	20.0	20.0	20.0	19.5
100	pH	7.6			7.9
	O2 ppm	10.2			10.1
	Cond.	352			353
	Temp(C)	20.0	20.0	20.0	19.5

TOXICITY TEST REPORT

Sample: 03890277

TEST CONDITIONS

Company : Du Pont Canada Inc.
Kingston, ONT
(80101)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (700)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Dickson
Date Collected : 11/14/89
Received : 11/17/89
Tested : 11/19/89 at: 1210
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E				TOTAL MORTALITY
	%	00:00	04:00	24:00	48:00
Control	0	0	1	1	8
6	0	0	0	0	0
13	0	0	1	1	8
25	0	0	0	0	0
50	0	0	1	1	8
100	0	0	0	0	0

48 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890277

TEST E L A P S E D T I M E
CONC. % 00:00 04:00 24:00 48:00

Control	pH	8.5			8.4
	O2 ppm	9.0			9.9
	Cond.	296			301
	Temp(C)	19.0	19.0	19.5	20.0
6	pH	8.5			8.3
	O2 ppm	9.0			9.5
	Cond.	301			300
	Temp(C)	19.0	19.0	19.5	20.0
13	pH	8.5			8.3
	O2 ppm	9.0			9.4
	Cond.	306			305
	Temp(C)	19.0	19.0	19.5	20.0
25	pH	8.4			8.3
	O2 ppm	9.0			9.3
	Cond.	313			311
	Temp(C)	19.0	19.0	19.5	20.0
50	pH	8.3			8.2
	O2 ppm	8.9			9.1
	Cond.	328			325
	Temp(C)	19.0	19.0	19.5	20.0
100	pH	8.2			8.2
	O2 ppm	8.9			9.0
	Cond.	360			355
	Temp(C)	19.0	19.0	19.5	20.0

TOXICITY TEST REPORT

Sample: 03890392

TEST CONDITIONS

Company : Du Pont Canada Inc.
Kingston, ONT
(80101)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (700)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Dickson
Date Collected : 12/19/89
Received : 12/22/89
Tested : 12/22/89 at: 1555
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E			TOTAL MORTALITY	
	%	00:00	24:00	48:00	%
100	0	12	12		100
50	0	12	12		100
25	0	12	12		100
13	0	1	6		50
6	0	0	0		0
Control	0	0	0		0

48 Hour LC50 : 12.7 %

95% fid. limits : 10.0 - 16.0 %

Comments :

TOXICITY TEST PARAMETERS

Sample Number: 03890392

TEST CONC. %	E L A P S E D T I M E		
		00:00	24:00 48:00

100	pH	8.1	7.9
	O2 ppm	10.4	7.6
	Cond.	350	342
	Temp(C)	19.5	20.0
50	pH	8.2	8.2
	O2 ppm	9.6	7.9
	Cond.	331	324
	Temp(C)	19.5	20.0
25	pH	8.2	8.3
	O2 ppm	9.2	8.2
	Cond.	320	316
	Temp(C)	19.5	20.0
13	pH	8.2	8.3
	O2 ppm	9.1	8.6
	Cond.	315	318
	Temp(C)	19.5	20.0
6	pH	8.3	8.3
	O2 ppm	9.0	8.3
	Cond.	310	315
	Temp(C)	19.5	20.0
Control	pH	8.3	8.3
	O2 ppm	8.9	8.8
	Cond.	307	317
	Temp(C)	19.5	20.0

TOXICITY TEST REPORT

Sample: 03900048

TEST CONDITIONS

Company : Du Pont Canada Inc.
Kingston, ONT
(80101)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (700)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Dickson
Date Collected : 01/16/90
Received : 01/19/90
Tested : 01/19/90 at: 1210
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY %
	%	00:00	24:00 48:00	
100	0	0	0	0
50	0	0	1	8
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 > 100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900048

TEST CONC. %	ELAPSED TIME		
	00:00	24:00	48:00

100	pH	8.0	8.1
	O2 ppm	9.0	7.8
	Cond.	359	363
	Temp(C)	20.0	20.0 19.5
50	pH	8.2	8.2
	O2 ppm	8.9	8.1
	Cond.	328	331
	Temp(C)	20.0	20.0 19.5
25	pH	8.2	8.3
	O2 ppm	8.9	8.3
	Cond.	314	318
	Temp(C)	20.0	20.0 19.5
13	pH	8.2	8.4
	O2 ppm	8.8	8.4
	Cond.	306	309
	Temp(C)	20.0	20.0 19.5
6	pH	8.2	8.4
	O2 ppm	8.7	8.5
	Cond.	302	306
	Temp(C)	20.0	20.0 19.5
Control	pH	8.3	8.4
	O2 ppm	8.6	8.5
	Cond.	301	299
	Temp(C)	20.0	20.0 19.5

TOXICITY TEST REPORT

Sample: 03900146

TEST CONDITIONS

Company : Du Pont Canada Inc.
Kingston, ONT
(80101)
Region : Southeast
Industry : Organic Chemical

Control point : combined effluent, (700)

Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Dickson
Date Collected : 02/20/90
Received : 02/23/90
Tested : 02/23/90 at: 1450

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E			TOTAL MORTALITY
	%	00:00	24:00	48:00
100	0	12	12	100
50	0	11	11	91
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : 39.3 %

95% fid. limits : 29.9 - 51.4 %

Comments :

SLOPE of Mortality Curve : 5.8
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 03900146

TEST CONC.	E L A P S E D T I M E		
%	00:00	24:00	48:00

100	pH	10.2	9.8
	O2 ppm	9.3	8.8
	Cond.	429	424
	Temp(C)	20.0	20.0
50	pH	9.5	8.9
	O2 ppm	8.9	8.8
	Cond.	347	334
	Temp(C)	20.0	20.0
25	pH	9.1	8.7
	O2 ppm	8.8	8.9
	Cond.	322	315
	Temp(C)	20.0	20.0
13	pH	8.8	8.6
	O2 ppm	8.8	8.9
	Cond.	312	309
	Temp(C)	20.0	20.0
6	pH	8.6	8.5
	O2 ppm	8.8	8.8
	Cond.	303	303
	Temp(C)	20.0	20.0
Control	pH	8.5	8.5
	O2 ppm	8.7	8.8
	Cond.	299	292
	Temp(C)	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT

Sample: 02900021

TEST CONDITIONS

Company : Du Pont Canada Inc.
Kingston, ONT
(80101)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (700)
Laboratory : MOE
Sampling Method : Grab
Sampled By : A. Verbaas
Date Collected : 02/26/90
Received : 02/28/90
Tested : 02/28/90 at: 1200
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
	%	00:00	01:00	24:00	48:00	%
100	0	0	6	12	100	
60	0	0	0	2	16	
30	0	0	0	0	0	
15	0	0	0	0	0	
5	0	0	0	0	0	
Control	0	0	0	0	0	

48 Hour LC50 : 70.0 %

95% fid. limits : 61.5 - 79.6 %

Comments : MISA Audit/high biological oxygen demand

SLOPE of Mortality Curve :
LC50 Calculated By : Spearman-Kärber alpha = 0

TOXICITY TEST PARAMETERS

Sample Number: 02900021

TEST CONC. %	E L A P S E D T I M E			
	00:00	01:00	24:00	48:00

100	pH	9.3			8.3
	O2 ppm	10.5			1.1
	Cond.	378			381
	Temp(C)	20.0	20.0	20.0	20.0
60	pH	9.0			7.4
	O2 ppm	10.0			2.4
	Cond.	354			356
	Temp(C)	20.0	20.0	20.0	20.0
30	pH	8.7			7.5
	O2 ppm	9.6			5.3
	Cond.	340			323
	Temp(C)	20.0	20.0	20.0	20.0
15	pH	8.4			7.7
	O2 ppm	9.4			6.7
	Cond.	333			337
	Temp(C)	20.0	20.0	20.0	20.0
5	pH	8.0			7.8
	O2 ppm	9.3			7.9
	Cond.	328			329
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH	7.8			7.6
	O2 ppm	9.3			8.5
	Cond.	320			320
	Temp(C)	20.0	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 03900234

TEST CONDITIONS

Company : Du Pont Canada Inc.
Kingston, ONT
(80101)
Region : Southeast
Industry : Organic Chemical

Control point : combined effluent, (700)

Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Dickson
Date Collected : 03/20/90
Received : 03/23/90
Tested : 03/23/90 at: 1150

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E			TOTAL MORTALITY
	%	00:00	24:00 48:00	
100	0	4	6	50
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900234

TEST CONC.	E L A P S E D T I M E		
%	00:00	24:00	48:00

100	pH	8.3	8.0
	O2 ppm	9.2	7.7
	Cond.	351	348
	Temp(C)	20.0	20.0 19.5
50	pH	8.2	8.2
	O2 ppm	8.9	8.1
	Cond.	322	318
	Temp(C)	20.0	20.0 19.5
25	pH	8.2	8.3
	O2 ppm	8.8	8.2
	Cond.	313	309
	Temp(C)	20.0	20.0 19.5
13	pH	8.3	8.3
	O2 ppm	8.8	8.3
	Cond.	307	303
	Temp(C)	20.0	20.0 19.5
6	pH	8.3	8.4
	O2 ppm	8.8	8.3
	Cond.	304	301
	Temp(C)	20.0	20.0 19.5
Control	pH	8.3	8.4
	O2 ppm	8.8	8.3
	Cond.	300	297
	Temp(C)	20.0	20.0 19.5

TOXICITY TEST REPORT

Sample: 03890229

TEST CONDITIONS

Company : Du Pont Canada Inc.
 Kingston, ONT
 (80101)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (1100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. Dickson
 Date Collected : 10/17/89
 Received : 10/20/89
 Tested : 10/20/89 at: 1030
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
	%	00:00	02:00	04:00	24:00	48:00
Control	0	0	0	0	0	0
6	0	0	0	0	0	0
13	0	0	0	1	1	8
25	0	0	0	10	12	100
50	0	0	0	12	12	100
100	0	9	12	12	12	100

48 Hour LC50 : 16.2 %

95% fid. limits : 12.1 - 21.6 %

Comments :

SLOPE of Mortality Curve : 5.4
 LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 03890229

TEST E L A P S E D T I M E
 CONC. % 00:00 02:00 04:00 24:00 48:00

Control	pH	8.4				8.4
	O2 ppm	8.9				8.9
	Cond.	310				297
	Temp(C)	20.0	20.0	20.0	19.5	19.0
6	pH	8.4				8.4
	O2 ppm	9.1				8.9
	Cond.	312				307
	Temp(C)	20.0	20.0	20.0	19.5	19.0
13	pH	8.3				8.4
	O2 ppm	9.1				9.0
	Cond.	313				308
	Temp(C)	20.0	20.0	20.0	19.5	19.0
25	pH	8.3				8.4
	O2 ppm	9.2				9.0
	Cond.	315				310
	Temp(C)	20.0	20.0	20.0	19.5	19.0
50	pH	8.3				8.3
	O2 ppm	9.4				9.6
	Cond.	321				321
	Temp(C)	20.0	20.0	20.0	19.5	
100	pH	8.2				8.2
	O2 ppm	10.2				10.2
	Cond.	335				335
	Temp(C)	20.0	20.0	20.0		

TOXICITY TEST REPORT

Sample: 03890278

TEST CONDITIONS

Company : Du Pont Canada Inc.
 Kingston, ONT
 (80101)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (1100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. Dickson
 Date Collected : 11/14/89
 Received : 11/17/89
 Tested : 11/19/89 at: 1500
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E				TOTAL MORTALITY	
	%	00:00	04:00	24:00	48:00	%
Control	0	0	0	0	0	0
6	0	0	0	0	0	0
13	0	0	0	0	0	0
25	0	0	0	1	0	8
50	0	0	0	0	0	0
100	0	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890278

TEST CONC.	E L A P S E D T I M E			
	%	00:00	04:00	24:00

Control	pH	8.5			8.4
	O2 ppm	9.0			9.6
	Cond.	296			295
	Temp(C)	19.0	19.0	19.5	20.0
6	pH	8.5			8.4
	O2 ppm	8.7			9.3
	Cond.	294			297
	Temp(C)	19.0	19.0	19.5	20.0
13	pH	8.5			8.4
	O2 ppm	8.8			9.2
	Cond.	303			301
	Temp(C)	19.0	19.0	19.5	20.0
25	pH	8.4			8.4
	O2 ppm	8.9			9.2
	Cond.	311			308
	Temp(C)	19.0	19.0	19.5	20.0
50	pH	8.4			8.3
	O2 ppm	9.0			9.2
	Cond.	326			324
	Temp(C)	19.0	19.0	19.5	20.0
100	pH	8.1			8.2
	O2 ppm	9.3			9.1
	Cond.	358			354
	Temp(C)	19.0	19.0	19.5	20.0

TOXICITY TEST REPORT

Sample: 03890393

TEST CONDITIONS

Company : Du Pont Canada Inc.
 Kingston, ONT
 (80101)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (1100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. Dickson
 Date Collected : 12/19/89
 Received : 12/22/89
 Tested : 12/23/89 at: 1215
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00 48:00	
100	0	0	12	100
50	0	0	12	100
25	0	0	11	91
13	0	0	9	75
6	0	0	4	33
Control	0	0	1	8

48 Hour LC50 : 8.0 %

95% fid. limits : 5.3 - 12.0 %

Comments :

SLOPE of Mortality Curve : 2.5
 LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 03890393

TEST ELAPSED TIME
 CONC. % 00:00 24:00 48:00

100	pH	8.2	7.8
	O2 ppm	10.6	6.8
	Cond.	348	343
	Temp(C)	20.0 19.5	20.0
50	pH	8.3	8.1
	O2 ppm	9.6	7.7
	Cond.	322	323
	Temp(C)	20.0 19.5	20.0
25	pH	8.3	8.3
	O2 ppm	9.2	8.2
	Cond.	311	313
	Temp(C)	20.0 19.5	20.0
13	pH	8.3	8.4
	O2 ppm	9.0	8.3
	Cond.	306	308
	Temp(C)	20.0 19.5	20.0
6	pH	8.4	8.4
	O2 ppm	8.8	8.4
	Cond.	302	305
	Temp(C)	20.0 19.5	20.0
Control	pH	8.4	8.4
	O2 ppm	9.0	8.3
	Cond.	301	296
	Temp(C)	20.0 19.5	20.0

TOXICITY TEST REPORT

Sample: 03900047

TEST CONDITIONS

Company : Du Pont Canada Inc.
Kingston, ONT
(80101)
Region : Southeast
Industry : Organic Chemical

Control point : combined effluent, (1100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : D.Dickson
Date Collected : 01/16/90
Received : 01/19/90
Tested : 01/19/90 at: 1130

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00	
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900047

TEST CONC.	%	ELAPSED TIME		
		00:00	24:00	48:00
100	pH	8.0		8.0
	O2 ppm	8.8		7.7
	Cond.	340		349
	Temp(C)	20.0	20.0	19.5
50	pH	8.1		8.2
	O2 ppm	8.8		8.2
	Cond.	319		324
	Temp(C)	20.0	20.0	19.5
25	pH	8.2		8.3
	O2 ppm	8.7		8.4
	Cond.	308		312
	Temp(C)	20.0	20.0	19.5
13	pH	8.2		8.4
	O2 ppm	8.6		8.6
	Cond.	304		307
	Temp(C)	20.0	20.0	19.5
6	pH	8.2		8.4
	O2 ppm	8.6		8.7
	Cond.	302		303
	Temp(C)	20.0	20.0	19.5
Control	pH	8.3		8.4
	O2 ppm	8.6		8.5
	Cond.	301		297
	Temp(C)	20.0	20.0	19.5

TOXICITY TEST REPORT

Sample: 03900145

TEST CONDITIONS

Company : Du Pont Canada Inc.
Kingston, ONT
(80101)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (1100)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Dickson
Date Collected : 02/20/90
Received : 02/23/90
Tested : 02/23/90 at: 1520
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	12	12	100
50	0	12	12	100
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : 35.3 %
95% fid. limits : 25.0 - 50.0 %
Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : Geometric Mean

TOXICITY TEST PARAMETERS

Sample Number: 03900145

TEST ELAPSED TIME
CONC. % 00:00 24:00 48:00

100	pH	11.1	10.4
	O2 ppm	9.3	8.9
	Cond.	872	780
	Temp(C)	20.0	20.0
50	pH	10.1	9.8
	O2 ppm	9.0	8.8
	Cond.	492	478
	Temp(C)	20.0	20.0
25	pH	9.5	9.0
	O2 ppm	8.8	8.7
	Cond.	376	355
	Temp(C)	20.0	20.0
13	pH	9.2	8.7
	O2 ppm	8.6	8.8
	Cond.	341	325
	Temp(C)	20.0	20.0
6	pH	8.9	8.6
	O2 ppm	8.6	8.8
	Cond.	323	313
	Temp(C)	20.0	20.0
Control	pH	8.5	8.5
	O2 ppm	8.7	8.9
	Cond.	299	302
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 02900023

TEST CONDITIONS

Company : Du Pont Canada Inc.
 Kingston, ONT
 (80101)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (1100)
 Laboratory : MOE
 Sampling Method : Grab
 Sampled By : A. verbaas
 Date Collected : 02/26/90
 Received : 02/28/90
 Tested : 02/28/90 at: 1340
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
	%	00:00	01:00	24:00	48:00
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
15	0	0	0	0	0
5	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
 LC50 Calculated By : None

TOXICITY TEST PARAMETERS

Sample Number: 02900023

TEST CONC.	%	ELAPSED TIME			
		00:00	01:00	24:00	48:00
100	pH	8.9			7.7
	O2 ppm	10.0			4.0
	Cond.	347			346
	Temp(C)	20.0	20.0	20.0	20.0
60	pH	8.7			7.6
	O2 ppm	9.6			5.1
	Cond.	341			345
	Temp(C)	20.0	20.0	20.0	20.0
30	pH	8.4			7.7
	O2 ppm	9.4			6.2
	Cond.	332			337
	Temp(C)	20.0	20.0	20.0	20.0
15	pH	8.2			7.8
	O2 ppm	9.3			7.1
	Cond.	329			334
	Temp(C)	20.0	20.0	20.0	20.0
5	pH	7.9			7.9
	O2 ppm	9.2			7.9
	Cond.	326			332
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH	7.5			8.0
	O2 ppm	9.3			8.3
	Cond.	326			327
	Temp(C)	20.0	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 03900235

TEST CONDITIONS

Company : Du Pont Canada Inc.
Kingston, ONT
(80101)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (1100)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Dickson
Date Collected : 03/20/90
Received : 03/23/90
Tested : 03/23/90 at: 1205
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E			TOTAL MORTALITY
	%	00:00	24:00	48:00
100	0	4	4	33
50	0	0	0	0
25	0	1	1	8
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900235

TEST CONC.	E L A P S E D T I M E		
%	00:00	24:00	48:00

100	pH	8.2	7.9
	O2 ppm	9.2	7.7
	Cond.	348	349
	Temp(C)	20.0	20.0
50	pH	8.2	8.1
	O2 ppm	9.0	8.1
	Cond.	323	323
	Temp(C)	20.0	20.0
25	pH	8.3	8.3
	O2 ppm	9.0	8.4
	Cond.	311	310
	Temp(C)	20.0	20.0
13	pH	8.2	8.3
	O2 ppm	8.9	8.5
	Cond.	305	305
	Temp(C)	20.0	20.0
6	pH	8.2	8.3
	O2 ppm	8.9	8.6
	Cond.	302	301
	Temp(C)	20.0	20.0
Control	pH	8.3	8.4
	O2 ppm	8.8	8.6
	Cond.	300	293
	Temp(C)	20.0	20.0

COMPANY: Du Pont Canada Inc., Maitland
(80002)
(now with Maitland Site)
SECTOR: Organic Chemical
REGION: Southeast

SUMMARY

The data for nine trout bioassays, conducted on combined effluent and intake water samples collected between October 1989 and March 1990, were provided by Du Pont Canada Incorporated. Two of the combined effluent samples were determined to have been acutely lethal to test fish. Both sample 96 hour LC50s were >100 %. The Ministry audit sample, collected in November, 96 hour LC50 was 70.1 %. The remaining four combined effluent samples were determined to have been non-acutely lethal to test fish. Two of the intake water samples were determined to have been non-acutely lethal while the third, collected in February, had a 96 hour LC50 >100 %.

process effluent

process effluent

combined effluent

combined effluent

storm water

storm water

intake water

03890275 sampled: 11/15/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900051 sampled: 01/17/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non Lethal

03900143 sampled: 02/21/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

Du Pont Canada Inc. (continued)

combined effluent

03890230 sampled: 10/18/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

03890276 sampled: 11/15/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

01890266 sampled: 11/15/89 LC50: 70.1 %
95% fid. limits: 57.5 - 88.9 %
comments: MISA audit sample.

03890394 sampled: 12/20/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900050 sampled: 01/17/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900144 sampled: 02/21/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900236 sampled: 03/21/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; Non lethal

emergency overflow

rain gauge

TOXICITY TEST REPORT

Sample: 03890275

TEST CONDITIONS

Company : Du Pont Canada Inc.
 Maitland, ONT
 (80002)
 Region : Southeast
 Industry : Organic Chemical
 Control point : intake water, (1000)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : T. Pickering
 Date Collected : 11/15/89
 Received : 11/17/89
 Tested : 11/18/89 at: 1030

Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC. %	E L A P S E D T I M E	TOTAL MORTALITY %
Control		0
10		0
20		0
40		0
65		0
100		0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890275

TEST CONC. %	E L A P S E D T I M E
--------------------	-------------------------

Control	error
10	error
20	error
40	error
65	error
100	error

TOXICITY TEST REPORT

Sample: 03900051

TEST CONDITIONS

Company : Du Pont Canada Inc.
Maitland, ONT
(80002)
Region : Southeast
Industry : Organic Chemical

Control point : intake water, (1000)

Laboratory : BAR
Sampling Method : Grab
Sampled By : T. Meyer
Date Collected : 01/17/90
Received : 01/19/90
Tested : 01/20/90 at: 1500

Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non Lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900051

TEST CONC. %	ELAPSED TIME				
	00:00	24:00	48:00	72:00	96:00

100	pH	8.1				8.2
	O2 ppm	10.4				9.3
	Cond.	362				363
	Temp(C)	15.5	14.5	14.0	14.0	14.0
65	pH	8.0				8.4
	O2 ppm	10.3				9.3
	Cond.	411				415
	Temp(C)	15.5	14.5	14.0	14.0	14.0
40	pH	8.0				8.5
	O2 ppm	9.7				9.6
	Cond.	458				463
	Temp(C)	15.0	14.5	14.0	14.0	14.0
20	pH	7.9				8.5
	O2 ppm	9.4				9.5
	Cond.	497				499
	Temp(C)	15.0	14.5	14.0	14.0	14.0
10	pH	7.9				8.5
	O2 ppm	9.3				9.4
	Cond.	520				520
	Temp(C)	15.0	14.5	14.0	14.0	14.0
5	pH	7.9				8.5
	O2 ppm	9.1				9.2
	Cond.	527				524
	Temp(C)	15.0	14.5	14.0	14.0	14.0
Control	pH	7.9				8.5
	O2 ppm	9.0				9.2
	Cond.	541				531
	Temp(C)	15.0	14.5	14.0	14.0	14.0

TOXICITY TEST REPORT

Sample: 03900143

TEST CONDITIONS

Company : Du Pont Canada Inc.
Maitland, ONT
(80002)
Region : Southeast
Industry : Organic Chemical
Control point : intake water, (1000)
Laboratory : BAR
Sampling Method : Grab
Sampled By : T. Meyer
Date Collected : 02/21/90
Received : 02/23/90
Tested : 02/23/90 at: 1600
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY	
	%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	1		10
65	0	0	0	0	0		0
40	0	0	0	0	0		0
20	0	0	0	0	0		0
10	0	0	0	0	0		0
5	0	0	0	0	0		0
Control	0	0	0	0	0		0

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

TOXICITY TEST PARAMETERS

Sample Number: 03900143

TEST CONC. %		E L A P S E D T I M E				
		00:00	24:00	48:00	72:00	96:00
100	pH	7.9				8.2
	O2 ppm	10.2				9.7
	Cond.	352				352
	Temp(C)	15.0	14.5	14.0	14.0	14.5
65	pH	7.9				8.3
	O2 ppm	10.0				9.5
	Cond.	426				419
	Temp(C)	15.0	14.5	14.0	14.0	14.5
40	pH	7.9				8.4
	O2 ppm	9.9				9.5
	Cond.	471				468
	Temp(C)	15.0	14.5	14.0	14.0	14.5
20	pH	7.9				8.4
	O2 ppm	9.7				9.5
	Cond.	510				505
	Temp(C)	15.5	14.5	14.0	14.0	14.5
10	pH	7.9				8.5
	O2 ppm	9.5				9.8
	Cond.	528				512
	Temp(C)	16.0	14.5	14.0	14.0	14.5
5	pH	7.9				8.5
	O2 ppm	9.4				9.6
	Cond.	537				519
	Temp(C)	16.0	14.5	14.0	14.0	14.5
Control	pH	7.9				8.5
	O2 ppm	8.9				9.3
	Cond.	548				540
	Temp(C)	16.0	14.5	14.0	14.0	14.5

TOXICITY TEST REPORT

Sample: 03890230

TEST CONDITIONS

Company : Du Pont Canada Inc.
Maitland, ONT
(80002)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (1100)
Laboratory : BAR
Sampling Method : Grab
Sampled By : T. Meyer
Date Collected : 10/18/89
Received : 10/20/89
Tested : 10/20/89 at: 1430
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E						TOTAL MORTALITY %
	%	00:00	04:00	24:00	48:00	72:00	96:00
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	2	3	5	5	50

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890230

TEST E L A P S E D T I M E
CONC. % 00:00 04:00 24:00 48:00 72:00 96:00

Control	pH	7.7					8.4
	O2 ppm	8.4					8.9
	Cond.	573					565
	Temp(C)	14.0	14.5	15.0	15.0	15.5	15.5
10	pH	7.6					8.5
	O2 ppm	8.6					8.9
	Cond.	554					550
	Temp(C)	14.0	14.5	15.0	15.0	15.5	15.5
20	pH	7.6					8.3
	O2 ppm	8.9					8.8
	Cond.	540					536
	Temp(C)	14.0	14.5	15.0	15.0	15.5	15.5
40	pH	7.5					8.3
	O2 ppm	9.0					8.9
	Cond.	509					507
	Temp(C)	14.0	14.5	15.0	15.0	15.5	15.5
65	pH	7.3					8.2
	O2 ppm	9.2					8.9
	Cond.	456					461
	Temp(C)	14.0	14.5	15.0	15.0	15.5	15.5
100	pH	6.8					7.8
	O2 ppm	9.3					8.3
	Cond.	394					394
	Temp(C)	14.0	14.5	15.0	15.0	15.5	15.5

TOXICITY TEST REPORT

Sample: 03890276

TEST CONDITIONS

Company : Du Pont Canada Inc.
 Maitland, ONT
 (80002)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (1100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : T. Pickering
 Date Collected : 11/15/89
 Received : 11/17/89
 Tested : 11/18/89 at: 1030

Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
	%	00:00	04:00	24:00	48:00	72:00	96:00
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	4	5	5	5	50

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890276

TEST ELAPSED TIME
 CONC. % 00:00 04:00 24:00 48:00 72:00 96:00

Control	pH	7.9					8.6
	O2 ppm	8.4					11.0
	Cond.	558					561
	Temp(C)	14.0	15.0	14.0	15.0	14.0	14.0
10	pH	7.9					8.6
	O2 ppm	9.4					11.0
	Cond.	549					515
	Temp(C)	14.0	15.0	14.0	15.0	14.0	14.0
20	pH	7.9					8.5
	O2 ppm	9.4					10.8
	Cond.	536					530
	Temp(C)	14.0	15.0	14.0	15.0	14.0	14.0
40	pH	7.8					8.5
	O2 ppm	9.5					11.0
	Cond.	510					500
	Temp(C)	14.0	15.0	14.0	15.0	14.0	14.0
65	pH	7.7					8.3
	O2 ppm	9.7					10.4
	Cond.	477					506
	Temp(C)	14.0	15.0	14.0	15.0	14.0	14.0
100	pH	7.5			8.1		
	O2 ppm	10.0			8.6		
	Cond.	430			442		
	Temp(C)	14.0	15.0	14.0	15.0	14.0	14.0

TOXICITY TEST REPORT

Sample: 01890266

TEST CONDITIONS

Company : Du Pont Canada Inc.
Maitland, ONT
(80002)
Region : Southeast
Industry : Organic Chemical

Control point : combined effluent, (1100)

Laboratory : MOE
Sampling Method : grab
Sampled By : A. Verbaas
Date Collected : 11/15/89
Received : 11/16/89
Tested : 11/16/89 at: 1430

Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME									TOTAL MORTALITY
%	00:00	01:10	01:00	02:00	04:00	24:10	48:00	70:10	96:00	%
100	0	0	0	0	0	4	7	8	9	90
65	0	0	0	0	0	0	2	3	3	30
40	0	0	0	0	0	0	1	1	1	10
30	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0	0

96 Hour LC50 : 70.1 %

95% fid. limits : 57.5 - 88.9 %

Comments : MISA audit sample.

SLOPE of Mortality Curve :
LC50 Calculated By : probit

TOXICITY TEST PARAMETERS

Sample Number: 01890266

TEST CONC. %	ELAPSED TIME									
	00:00	01:10	01:00	02:00	04:00	24:10	48:00	70:10	96:00	
100	pH	6.2	7.3			7.3	7.5	7.4	7.	
	O2 ppm	9.1	9.1			9.0	9.4	9.2	8.	
	Cond.	300	275			290	300	310	30	
	Temp(C)	15.0	15.0			16.0	15.0	15.0	16.	
65	pH		7.4			7.6	7.5	7.4	7.	
	O2 ppm		9.2			9.6	9.7	9.6	8.	
	Cond.		255			265	285	290	28	
	Temp(C)		15.0			16.0	15.0	15.0	16.	
40	pH		7.5			7.6	7.4	7.4	7.	
	O2 ppm		9.4			9.7	9.9	9.3	8.	
	Cond.		250			255	275	280	26	
	Temp(C)		15.0			16.0	15.0	15.0	16.	
30	pH		7.5			7.6	7.4	7.4	7.	
	O2 ppm		9.5			10.0	10.0	9.8	9.	
	Cond.		240			260	270	275	25	
	Temp(C)		15.0			16.0	15.0	15.0	16.	
20	pH		7.5			7.7	7.3	7.3	7.	
	O2 ppm		9.6			9.8	9.8	9.8	8.	
	Cond.		235			245	265	270	25	
	Temp(C)		15.0			16.0	15.0	15.0	16.	
10	pH		7.5			7.7	7.2	7.2	7.	
	O2 ppm		9.6			9.9	9.9	9.9	9.	
	Cond.		230			240	260	265	25	
	Temp(C)		15.0			16.0	15.0	15.0	16.	
Control	pH		7.6			7.6	7.1	7.1	7.	
	O2 ppm		9.6			9.9	9.8	9.9	9.	
	Cond.		260			250	245	250	25	
	Temp(C)		15.0			16.0	15.0	15.0	16.	

TOXICITY TEST REPORT

Sample: 03890394

TEST CONDITIONS

Company : Du Pont Canada Inc.
Maitland, ONT
(80002)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (1100)
Laboratory : BAR
Sampling Method : Grab
Sampled By : T. Meyer
Date Collected : 12/20/89
Received : 12/22/89
Tested : 12/23/89 at: 1445
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890394

TEST CONC. %	ELAPSED TIME				
	00:00	24:00	48:00	72:00	96:00

100	pH	7.6				8.1
	O2 ppm	8.0				9.5
	Cond.	460				472
	Temp(C)	15.0	14.0	14.0	14.5	14.5
65	pH	7.8				8.2
	O2 ppm	8.2				9.5
	Cond.	489				496
	Temp(C)	15.0	14.0	14.0	14.5	14.5
40	pH	7.8				8.3
	O2 ppm	8.6				9.7
	Cond.	512				519
	Temp(C)	15.0	14.0	14.0	14.5	14.5
20	pH	7.9				8.3
	O2 ppm	9.0				9.4
	Cond.	530				536
	Temp(C)	15.0	14.0	14.0	14.5	14.5
10	pH	7.9				8.4
	O2 ppm	9.0				9.6
	Cond.	539				543
	Temp(C)	15.0	14.0	14.0	14.5	14.5
5	pH	7.9				8.5
	O2 ppm	9.0				9.3
	Cond.	549				551
	Temp(C)	15.0	14.0	14.0	14.5	14.5
Control	pH	8.0				8.5
	O2 ppm	9.5				9.4
	Cond.	556				563
	Temp(C)	15.0	14.0	14.0	14.5	14.5

TOXICITY TEST REPORT

Sample: 03900050

TEST CONDITIONS

Company : Du Pont Canada Inc.
Maitland, ONT
(80002)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (1100)
Laboratory : BAR
Sampling Method : Grab
Sampled By : T. Meyer
Date Collected : 01/17/90
Received : 01/19/90
Tested : 01/20/90 at: 1500
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900050

TEST CONC. %	ELAPSED TIME					
		00:00	24:00	48:00	72:00	96:00
100	pH	7.8				8.3
	O2 ppm	9.4				10.1
	Cond.	582				578
	Temp(C)	15.0	14.5	14.0	14.0	14.0
65	pH	7.8				8.4
	O2 ppm	9.5				10.1
	Cond.	572				567
	Temp(C)	15.0	14.5	14.0	14.0	14.0
40	pH	7.8				8.4
	O2 ppm	9.1				9.8
	Cond.	559				557
	Temp(C)	15.0	14.5	14.0	14.0	14.0
20	pH	7.9				8.5
	O2 ppm	8.9				10.1
	Cond.	549				554
	Temp(C)	15.0	14.5	14.0	14.0	14.0
10	pH	7.9				8.5
	O2 ppm	8.8				10.1
	Cond.	542				543
	Temp(C)	15.0	14.5	14.0	14.0	14.0
5	pH	7.9				8.4
	O2 ppm	8.9				10.1
	Cond.	540				528
	Temp(C)	15.0	14.5	14.0	14.0	14.0
Control	pH	7.9				8.4
	O2 ppm	8.7				10.1
	Cond.	542				537
	Temp(C)	15.0	14.5	14.0	14.0	14.0

TOXICITY TEST REPORT

Sample: 03900144

TEST CONDITIONS

Company : Du Pont Canada Inc.
Maitland, ONT
(80002)
Region : Southeast
Industry : Organic Chemical

Control point : combined effluent, (1100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : T. Meyer
Date Collected : 02/21/90
Received : 02/23/90
Tested : 02/23/90 at: 1530

Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY	
	%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900144

TEST CONC. %	ELAPSED TIME					
		00:00	24:00	48:00	72:00	96:00
100	pH	7.7				8.1
	O2 ppm	9.8				9.3
	Cond.	445				454
	Temp(C)	15.0	14.5	14.0	14.0	15.0
65	pH	7.8				8.1
	O2 ppm	9.5				8.8
	Cond.	488				488
	Temp(C)	15.0	14.5	14.0	14.0	15.0
40	pH	7.8				8.4
	O2 ppm	9.6				9.4
	Cond.	509				507
	Temp(C)	15.0	14.5	14.0	14.0	15.0
20	pH	7.9				8.5
	O2 ppm	9.6				9.6
	Cond.	527				521
	Temp(C)	15.5	14.5	14.0	14.0	15.0
10	pH	7.9				8.4
	O2 ppm	9.6				9.3
	Cond.	534				530
	Temp(C)	15.5	14.5	14.0	14.0	15.0
5	pH	7.9				8.4
	O2 ppm	9.5				9.2
	Cond.	536				532
	Temp(C)	15.5	14.5	14.0	14.0	15.0
Control	pH	7.9				8.5
	O2 ppm	9.0				8.7
	Cond.	542				538
	Temp(C)	16.0	14.5	14.0	14.0	15.0

TOXICITY TEST REPORT

Sample: 03900236

TEST CONDITIONS

Company : Du Pont Canada Inc.
 Maitland, ONT
 (80002)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (1100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : T. Meyer
 Date Collected : 03/21/90
 Received : 03/23/90
 Tested : 03/23/90 at: 1340
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test; Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900236

TEST CONC.	ELAPSED TIME				
%	00:00	24:00	48:00	72:00	96:00
100	pH	8.0			8.3
	O2 ppm	10.1			9.8
	Cond.	439			461
	Temp(C)	15.0	14.5	14.5	14.0
100	pH	8.0			8.3
	O2 ppm	10.1			9.7
	Cond.	439			455
	Temp(C)	15.0	14.5	14.5	14.0
Control	pH	7.9			8.5
	O2 ppm	9.6			9.6
	Cond.	518			510
	Temp(C)	15.0	14.5	14.5	14.0
Control	pH	7.9			8.5
	O2 ppm	9.6			9.7
	Cond.	518			521
	Temp(C)	15.0	14.5	14.5	14.0

COMPANY: Du Pont Canada Inc., Maitland
(80002)
(now with Maitland Site)
SECTOR: Organic Chemical
REGION: Southeast

SUMMARY

Data for nine *Daphnia magna* acute lethality toxicity tests conducted on samples of intake water and combined effluent collected between October 1989 and March 1990 were submitted by Du Pont Canada Inc. of Maitland.

Two of three intake water samples were toxic to *Daphnia*, as was an audit sample tested in the Ministry laboratory in November.

Four of six samples of combined effluent were not acutely lethal to *Daphnia*. The samples collected at the beginning of the monitoring period in October and November were toxic to *Daphnia*. LC50s for these sample were 15.1 and 17.9% consecutively. An audit sample tested in the Ministry laboratory in November was also toxic to *Daphnia* with 48 h LC50 = 41.1%.

process effluent

process effluent

combined effluent

combined effluent

storm water

storm water

intake water

03890275 sampled: 11/15/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100%

02890265 sampled: 11/15/89 LC50: 15.0 - 30.0 %
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit/immobilization within 24 hrs.

03900051 sampled: 01/17/90 LC50: 30.7 %
95% fid. limits: 23.4 - 40.1 % slope: 4.2
comments: Lethal

03900143 sampled: 02/21/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

Du Pont Canada Inc. (continued)

combined effluent

03890230 sampled: 10/18/89 LC50: 15.1 %
95% fid. limits: 11.4 - 20.0 % slope: 3.8
comments:

02890266 sampled: 11/15/89 LC50: 41.0 %
95% fid. limits: 38.4 - 43.9 %
comments: MISA Audit/ high oxygen demand

03890276 sampled: 11/15/89 LC50: 17.9 %
95% fid. limits: 13.4 - 23.6 % slope: 4.6
comments:

03890394 sampled: 12/20/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900050 sampled: 01/17/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900144 sampled: 02/21/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900236 sampled: 03/21/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

emergency overflow

rain gauge

TOXICITY TEST REPORT

Sample: 03890275

TEST CONDITIONS

Company : Du Pont Canada Inc.
 Maitland, ONT
 (80002)
 Region : Southeast
 Industry : Organic Chemical
 Control point : intake water, (1000)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : T. Pickering
 Date Collected : 11/15/89
 Received : 11/17/89
 Tested : 11/20/89 at: 1240

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E				TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	%
Control	0	0	0	1	8
6	0	0	0	0	0
13	0	0	1	1	8
25	0	0	0	0	0
50	0	0	0	0	0
100	0	0	0	2	16

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100%

SLOPE of Mortality Curve :
 LC50 Calculated By :TOXICITY TEST PARAMETERS

Sample Number: 03890275

TEST CONC. %	E L A P S E D T I M E			
	00:00	04:00	24:00	48:00

Control	pH	8.4			8.6
	O2 ppm	7.9			9.2
	Cond.	300			338
	Temp(C)	20.0	20.0	20.0	19.5
6	pH	8.5			8.4
	O2 ppm	8.4			9.3
	Cond.	303			304
	Temp(C)	20.0	20.0	20.0	19.5
13	pH	8.4			8.3
	O2 ppm	8.2			9.4
	Cond.	306			302
	Temp(C)	20.0	20.0	20.0	19.5
25	pH	8.3			8.3
	O2 ppm	8.1			9.3
	Cond.	310			307
	Temp(C)	20.0	20.0	20.0	19.5
50	pH	8.3			8.3
	O2 ppm	8.6			9.2
	Cond.	320			316
	Temp(C)	20.0	20.0	20.0	19.5
100	pH	8.0			8.1
	O2 ppm	9.1			9.1
	Cond.	338			338
	Temp(C)	20.0	20.0	20.0	19.5

TOXICITY TEST REPORT

Sample: 02890265

TEST CONDITIONS

Company : Du Pont Canada Inc.
Maitland, ONT
(80002)
Region : Southeast
Industry : Organic Chemical

Control point : intake water, (1000)

Laboratory : MOE
Sampling Method : grab
Sampled By : A. Verbaas
Date Collected : 11/15/89
Received : 11/16/89
Tested : 11/16/89 at: 1254

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E				TOTAL MORTALITY
	%	00:00	01:00	24:00 48:00	
100	0	0	12	12	100
60	0	0	12	12	100
30	0	0	0	12	100
15	0	0	0	0	0
5	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : 15.0 - 30.0 %

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit/immobilization within 24 hrs.

SLOPE of Mortality Curve :
LC50 Calculated By : unable to calculate

TOXICITY TEST PARAMETERS

Sample Number: 02890265

TEST CONC. %	E L A P S E D T I M E			
	00:00	01:00	24:00	48:00

100	pH	7.7		8.1
	O2 ppm	9.7		8.0
	Cond.	295		305
	Temp(C)	20.0	20.0	20.0
60	pH	7.8		8.1
	O2 ppm	9.5		8.1
	Cond.	297		305
	Temp(C)	20.0	20.0	20.0
30	pH	7.9		8.1
	O2 ppm	9.3		8.1
	Cond.	297		305
	Temp(C)	20.0	20.0	20.0
15	pH	7.9		8.1
	O2 ppm	9.2		8.0
	Cond.	291		306
	Temp(C)	20.0	20.0	20.0
5	pH	7.9		7.9
	O2 ppm	9.1		7.6
	Cond.	297		305
	Temp(C)	20.0	20.0	20.0
Control	pH	7.9		8.0
	O2 ppm	9.0		7.7
	Cond.	292		288
	Temp(C)	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 03900051

TEST CONDITIONS

Company : Du Pont Canada Inc.
Maitland, ONT
(80002)
Region : Southeast
Industry : Organic Chemical
Control point : intake water, (1000)
Laboratory : BAR
Sampling Method : Grab
Sampled By : T. Meyer
Date Collected : 01/17/90
Received : 01/19/90
Tested : 01/19/90 at: 1350
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00 48:00	
100	0	12	12	100
50	0	11	11	91
25	0	4	4	33
13	0	0	0	0
6	0	0	0	0
Control	0	0	1	8

48 Hour LC50 : 30.7 %

95% fid. limits : 23.4 - 40.1 %

Comments : Lethal

TOXICITY TEST PARAMETERS

Sample Number: 03900051

TEST CONC.	ELAPSED TIME		
%	00:00	24:00	48:00

100	pH	8.0	8.2
	O2 ppm	9.0	8.5
	Cond.	334	343
	Temp(C)	20.0	20.0
50	pH	8.2	8.3
	O2 ppm	9.0	8.6
	Cond.	315	321
	Temp(C)	20.0	20.0 19.5
25	pH	8.3	8.4
	O2 ppm	8.9	8.6
	Cond.	304	310
	Temp(C)	20.0	20.0 19.5
13	pH	8.3	8.4
	O2 ppm	8.9	8.6
	Cond.	300	305
	Temp(C)	20.0	20.0 19.5
6	pH	8.3	8.4
	O2 ppm	8.9	8.4
	Cond.	299	302
	Temp(C)	20.0	20.0 19.5
Control	pH	8.3	8.4
	O2 ppm	8.6	8.0
	Cond.	301	296
	Temp(C)	20.0	20.0 19.5

TOXICITY TEST REPORT

Sample: 03900143

TEST CONDITIONS

Company : Du Pont Canada Inc.
 Maitland, ONT
 (80002)
 Region : Southeast
 Industry : Organic Chemical
 Control point : intake water, (1000)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : T. Meyer
 Date Collected : 02/21/90
 Received : 02/23/90
 Tested : 02/23/90 at: 1440
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY	
	%	00:00	24:00	48:00	%
100	0	0	0		0
50	0	0	0		0
25	0	0	0		0
13	0	0	0		0
6	0	0	0		0
Control	0	0	0		0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900143

TEST CONC. %		E L A P S E D T I M E		
		00:00	24:00	48:00
100	pH	8.0		8.3
	O2 ppm	9.3		8.8
	Cond.	339		338
	Temp(C)	20.0	20.0	19.0
50	pH	8.2		8.4
	O2 ppm	8.9		8.9
	Cond.	321		317
	Temp(C)	20.0	20.0	19.0
25	pH	8.4		8.4
	O2 ppm	8.7		8.9
	Cond.	313		308
	Temp(C)	20.0	20.0	19.0
13	pH	8.4		8.4
	O2 ppm	8.7		8.9
	Cond.	307		303
	Temp(C)	20.0	20.0	19.0
6	pH	8.4		8.4
	O2 ppm	8.6		9.0
	Cond.	303		298
	Temp(C)	20.0	20.0	19.0
Control	pH	8.5		8.5
	O2 ppm	8.7		8.8
	Cond.	299		303
	Temp(C)	20.0	20.0	19.0

TOXICITY TEST REPORT

Sample: 03890230

TEST CONDITIONS

Company : Du Pont Canada Inc.
Maitland, ONT
(80002)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (1100)
Laboratory : BAR
Sampling Method : Grab
Sampled By : T. Meyer
Date Collected : 10/18/89
Received : 10/20/89
Tested : 10/20/89 at: 1105
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
%	00:00	02:00	04:00	24:00	48:00	%
Control	0	0	0	0	0	0
6	0	0	0	0	0	0
13	0	0	0	2	5	41
25	0	0	5	9	10	83
50	0	7	9	12	12	100
100	0	12	12	12	12	100

48 Hour LC50 : 15.1 %

95% fid. limits : 11.4 - 20.0 %

Comments :

SLOPE of Mortality Curve : 3.8
LC50 Calculated By : Probit

TOXICITY TEST PARAMETERS

Sample Number: 03890230

TEST CONC. %	E L A P S E D T I M E				
	00:00	02:00	04:00	24:00	48:00

Control	pH	8.4				8.4
	O2 ppm	8.9				9.3
	Cond.	310				298
	Temp(C)	20.0	20.0	20.0	19.5	19.0
6	pH	8.3				8.2
	O2 ppm	9.1				8.7
	Cond.	320				312
	Temp(C)	20.0	20.0	20.0	19.5	19.0
13	pH	8.1				8.0
	O2 ppm	9.1				7.7
	Cond.	320				315
	Temp(C)	20.0	20.0	20.0	19.5	19.0
25	pH	7.9				7.8
	O2 ppm	9.1				6.1
	Cond.	329				322
	Temp(C)	20.0	20.0	20.0	19.5	19.0
50	pH	7.4				7.6
	O2 ppm	9.3				5.0
	Cond.	346				341
	Temp(C)	20.0	20.0	20.0	19.5	
100	pH	6.7	6.7			
	O2 ppm	9.8	9.8			
	Cond.	381	381			
	Temp(C)	20.0	20.0			

TOXICITY TEST REPORT

Sample: 02890266

TEST CONDITIONS

Company : Du Pont Canada Inc.
Maitland, ONT
(80002)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (1100)
Laboratory : MOE
Sampling Method : grab
Sampled By : A. Verbass
Date Collected : 11/15/89
Received : 11/16/89
Tested : 11/16/89 at: 1350
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	01:00	24:00	48:05	%
100	0	0	11	12	100
60	0	0	5	12	100
30	0	0	0	8	66
15	0	0	0	0	0
5	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : 41.0 %

95% fid. limits : 38.4 - 43.9 %

Comments : MISA Audit/ high oxygen demand

SLOPE of Mortality Curve :
LC50 Calculated By : Spearman-Kaber alpha=10

TOXICITY TEST PARAMETERS

Sample Number: 02890266

TEST ELAPSED TIME
CONC. % 00:00 01:00 24:00 48:05

100	pH	7.2			7.4
	O2 ppm	8.8			3.0
	Cond.	345			395
	Temp(C)	20.0	20.0	20.0	20.0
60	pH	7.5			7.4
	O2 ppm	8.9			3.9
	Cond.	327			361
	Temp(C)	20.0	20.0	20.0	20.0
30	pH	7.7			7.4
	O2 ppm	8.9			5.3
	Cond.	314			332
	Temp(C)	20.0	20.0	20.0	20.0
15	pH	7.9			7.6
	O2 ppm	9.0			6.6
	Cond.	306			307
	Temp(C)	20.0	20.0	20.0	20.0
5	pH	8.0			7.6
	O2 ppm	9.0			6.7
	Cond.	301			306
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH	8.0			7.7
	O2 ppm	8.9			7.2
	Cond.	292			272
	Temp(C)	20.0	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 03890276

TEST CONDITIONS

Company : Du Pont Canada Inc.
Maitland, ONT
(80002)
Region : Southeast
Industry : Organic Chemical

Control point : combined effluent, (1100)

Laboratory : BAR
Sampling Method : Grab
Sampled By : T. Pickering
Date Collected : 11/15/89
Received : 11/17/89
Tested : 11/20/89 at: 1240

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:00	%
Control	0	0	0	0	0	1	8
6	0	0	0	0	0	0	0
13	0	0	0	0	2	4	33
25	0	0	0	0	3	8	66
50	0	0	0	0	12	12	100
100	0	0	9	9	12	12	100

48 Hour LC50 : 17.9 %

95% fid. limits : 13.4 - 23.6 %

Comments :

TOXICITY TEST PARAMETERS

Sample Number: 03890276

TEST CONC. %	ELAPSED TIME					
	00:00	01:00	02:00	04:00	24:00	48:00
Control	pH 8.5					8.5
	O2 ppm 7.9					9.5
	Cond. 300					301
	Temp(C) 19.5	19.5	19.5	20.0	20.0	19.5
6	pH 8.5					8.3
	O2 ppm 8.6					8.8
	Cond. 304					307
	Temp(C) 19.5	19.5	19.5	20.0	20.0	19.5
13	pH 8.4					8.3
	O2 ppm 8.7					8.6
	Cond. 309					315
	Temp(C) 19.5	19.5	19.5	20.0	20.0	19.5
25	pH 8.3					8.1
	O2 ppm 8.7					8.1
	Cond. 326					330
	Temp(C) 19.5	19.5	19.5	20.0	20.0	19.5
50	pH 8.1					8.0
	O2 ppm 8.6					8.6
	Cond. 356					363
	Temp(C) 19.5	19.5	19.5	20.0	20.0	
100	pH 7.6					7.7
	O2 ppm 8.6					6.9
	Cond. 418					425
	Temp(C) 19.5	19.5	19.5	20.0	20.0	

TOXICITY TEST REPORT

Sample: 03890394

TEST CONDITIONS

Company : Du Pont Canada Inc.
Maitland, ONT
(80002)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (1100)
Laboratory : BAR
Sampling Method : Grab
Sampled By : T. Meyer
Date Collected : 12/20/89
Received : 12/22/89
Tested : 12/22/89 at: 1500
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00 48:00	
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890394

TEST CONC.	ELAPSED TIME		
%	00:00	24:00	48:00

100	pH	7.6	7.9
	O2 ppm	7.6	6.8
	Cond.	464	457
	Temp(C)	19.5	19.5 20.0
50	pH	7.9	8.1
	O2 ppm	8.6	7.7
	Cond.	386	382
	Temp(C)	19.5	19.5 20.0
25	pH	8.1	8.2
	O2 ppm	8.8	8.1
	Cond.	347	345
	Temp(C)	19.5	19.5 20.0
13	pH	8.1	8.2
	O2 ppm	9.0	8.4
	Cond.	326	329
	Temp(C)	19.5	19.5 20.0
6	pH	8.2	8.3
	O2 ppm	9.0	8.6
	Cond.	312	321
	Temp(C)	19.5	19.5 20.0
Control	pH	8.3	8.4
	O2 ppm	8.9	8.8
	Cond.	307	302
	Temp(C)	19.5	19.5 20.0

TOXICITY TEST REPORT

Sample: 03900050

TEST CONDITIONS

Company : Du Pont Canada Inc.
Maitland, ONT
(80002)
Region : Southeast
Industry : Organic Chemical
Control point : combined effluent, (1100)
Laboratory : BAR
Sampling Method : Grab
Sampled By : T. Meyer
Date Collected : 01/17/90
Received : 01/19/90
Tested : 01/19/90 at: 1340
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00	
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900050

TEST CONC. %	ELAPSED TIME		
	00:00	24:00	48:00

100	pH	7.7	8.0
	O2 ppm	8.9	7.5
	Cond.	553	556
	Temp(C)	20.0	20.0
50	pH	7.8	8.2
	O2 ppm	8.9	8.0
	Cond.	425	426
	Temp(C)	20.0	20.0
25	pH	8.1	8.3
	O2 ppm	8.9	8.3
	Cond.	363	367
	Temp(C)	20.0	20.0
13	pH	8.2	8.4
	O2 ppm	8.9	8.5
	Cond.	329	329
	Temp(C)	20.0	20.0
6	pH	8.3	8.4
	O2 ppm	8.9	8.5
	Cond.	312	313
	Temp(C)	20.0	20.0
Control	pH	8.3	8.4
	O2 ppm	8.6	8.4
	Cond.	301	293
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 03900144

TEST CONDITIONS

Company : Du Pont Canada Inc.
 Maitland, ONT
 (80002)
 Region : Southeast
 Industry : Organic Chemical

Control point : combined effluent, (1100)

Laboratory : BAR
 Sampling Method : Grab
 Sampled By : T. Meyer
 Date Collected : 02/21/90
 Received : 02/23/90
 Tested : 02/23/90 at: 1500

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00	
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900144

TEST CONC. %	ELAPSED TIME		
	00:00	24:00	48:00

100	pH	7.7	8.0
	O2 ppm	8.1	7.6
	Cond.	437	437
	Temp(C)	20.0	20.0
50	pH	8.0	8.2
	O2 ppm	8.4	8.2
	Cond.	370	369
	Temp(C)	20.0	20.0
25	pH	8.2	8.3
	O2 ppm	8.5	8.5
	Cond.	334	332
	Temp(C)	20.0	20.0
13	pH	8.4	8.4
	O2 ppm	8.5	8.7
	Cond.	320	316
	Temp(C)	20.0	20.0
6	pH	8.4	8.4
	O2 ppm	8.6	8.8
	Cond.	308	305
	Temp(C)	20.0	20.0
Control	pH	8.5	8.5
	O2 ppm	8.7	8.9
	Cond.	299	302
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 03900236

TEST CONDITIONS

Company : Du Pont Canada Inc.
 Maitland, ONT
 (80002)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (1100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : T. Meyer
 Date Collected : 03/21/90
 Received : 03/23/90
 Tested : 03/23/90 at: 1305

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00 48:00	
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900236

TEST CONC.	ELAPSED TIME		
	%	00:00	24:00 48:00

100	pH	8.0	8.0
	O2 ppm	8.8	8.0
	Cond.	447	446
	Temp(C)	20.0	19.5
50	pH	8.1	8.2
	O2 ppm	8.8	8.3
	Cond.	371	370
	Temp(C)	20.0	19.5
25	pH	8.2	8.3
	O2 ppm	8.8	8.5
	Cond.	335	334
	Temp(C)	20.0	19.5
13	pH	8.2	8.3
	O2 ppm	8.8	8.6
	Cond.	316	316
	Temp(C)	20.0	19.5
6	pH	8.2	8.4
	O2 ppm	8.9	8.6
	Cond.	306	308
	Temp(C)	20.0	19.5
Control	pH	8.3	8.4
	O2 ppm	8.8	8.6
	Cond.	300	294
	Temp(C)	20.0	19.5

COMPANY: Du Pont Canada Inc., Whitby
(80408)
SECTOR: Organic Chemical
REGION: Central

SUMMARY

The data for two trout bioassays, conducted on combined effluent samples collected between October 1989 and March 1990, were provided by Du Pont Canada Incorporated. Both samples of combined effluent were determined to have been non-acutely lethal to test fish.

Storm Water

Combined Effluent

03900157 sampled: 02/27/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: non lethal

03900250 sampled: 03/27/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: non lethal

OTCW

OTCW

OTCW

OTCW

Combined Effluent

TOXICITY TEST REPORT

Sample: 03900157

TEST CONDITIONS

Company : Du Pont Canada Inc.
 Whitby, ONT
 (80408)
 Region : Central
 Industry : Organic Chemical
 Control point : Combined Effluent, (200)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : T. Pickering
 Date Collected : 02/27/90
 Received : 02/28/90
 Tested : 03/01/90 at: 1230
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY	
	%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : non lethal

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900157

TEST CONC. %	E L A P S E D T I M E				
	00:00	24:00	48:00	72:00	96:00

100	pH	8.1				8.0
	O2 ppm	10.1				9.5
	Cond.	385				400
	Temp(C)	15.0	14.5	14.5	14.0	14.0
65	pH	8.0				8.1
	O2 ppm	9.6				9.3
	Cond.	444				454
	Temp(C)	15.0	14.5	14.5	14.0	14.0
40	pH	8.0				8.1
	O2 ppm	9.4				9.1
	Cond.	484				492
	Temp(C)	15.0	14.5	14.5	14.0	14.0
20	pH	8.0				8.4
	O2 ppm	9.2				9.6
	Cond.	516				523
	Temp(C)	15.0	14.5	14.5	14.0	14.0
10	pH	8.0				8.3
	O2 ppm	9.0				9.3
	Cond.	533				539
	Temp(C)	15.0	14.5	14.5	14.0	14.0
5	pH	7.9				8.3
	O2 ppm	8.9				9.2
	Cond.	544				554
	Temp(C)	15.0	14.5	14.5	14.0	14.0
Control	pH	7.9				8.4
	O2 ppm	8.2				9.4
	Cond.	545				556
	Temp(C)	15.0	14.5	14.5	14.0	14.0

TOXICITY TEST REPORT

Sample: 03900250

TEST CONDITIONS

Company : Du Pont Canada Inc.
Whitby, ONT
(80408)
Region : Central
Industry : Organic Chemical
Control point : Combined Effluent, (200)
Laboratory : BAR
Sampling Method : Grab
Sampled By : T. Pickering
Date Collected : 03/27/90
Received : 03/28/90
Tested : 03/28/90 at: 1525
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY	
	%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900250

TEST CONC. %	E L A P S E D T I M E					
		00:00	24:00	48:00	72:00	96:00
100	pH	8.0				8.1
	O2 ppm	9.9				9.2
	Cond.	358				370
	Temp(C)	14.5	14.5	14.5	15.0	14.5
65	pH	7.9				8.2
	O2 ppm	9.4				8.9
	Cond.	420				428
	Temp(C)	14.5	14.5	14.5	15.0	14.5
40	pH	7.9				8.2
	O2 ppm	9.3				8.6
	Cond.	463				471
	Temp(C)	14.5	14.5	14.5	15.0	14.5
20	pH	7.9				8.3
	O2 ppm	8.5				8.6
	Cond.	498				503
	Temp(C)	14.5	14.5	14.5	15.0	14.5
10	pH	7.9				8.4
	O2 ppm	8.2				8.7
	Cond.	513				516
	Temp(C)	14.5	14.5	14.5	15.0	14.5
5	pH	7.9				8.5
	O2 ppm	8.3				8.8
	Cond.	524				524
	Temp(C)	14.5	14.5	14.5	15.0	14.5
Control	pH	7.9				8.4
	O2 ppm	8.8				8.0
	Cond.	533				532
	Temp(C)	14.5	14.5	14.5	15.0	14.5

COMPANY: Du Pont Canada Inc., Whitby
(80408)
SECTOR: Organic Chemical
REGION: Central

SUMMARY

Monitoring at the Du Pont Canada Inc. plant in Whitby did not commence until February 1990, therefore data for only two Daphnia magna acute lethality tests conducted on samples of combined effluent were submitted. One sample was not acutely lethal to Daphnia, and the other had an LC50 > 100%.

Storm Water

Combined Effluent

03900157 sampled: 02/27/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900250 sampled: 03/27/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

OTCW

OTCW

OTCW

OTCW

Combined Effluent

TOXICITY TEST REPORT

Sample: 03900157

TEST CONDITIONS

Company : Du Pont Canada Inc.
 Whitby, ONT
 (80408)
 Region : Central
 Industry : Organic Chemical
 Control point : Combined Effluent, (200)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : T. Pickering
 Date Collected : 02/27/90
 Received : 02/28/90
 Tested : 03/01/90 at: 1010
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY %
	%	00:00	24:00	
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900157

TEST CONC. %	ELAPSED TIME		
	00:00	24:00	48:00

100	pH	8.1	8.2
	O2 ppm	9.2	8.4
	Cond.	380	377
	Temp(C)	20.0	20.5
50	pH	8.3	8.3
	O2 ppm	9.1	8.5
	Cond.	342	338
	Temp(C)	20.0	20.5
25	pH	8.3	8.4
	O2 ppm	9.0	8.5
	Cond.	328	325
	Temp(C)	20.0	20.5
13	pH	8.5	8.4
	O2 ppm	9.0	8.5
	Cond.	321	319
	Temp(C)	20.0	20.5
6	pH	8.5	8.4
	O2 ppm	8.9	8.6
	Cond.	314	312
	Temp(C)	20.0	20.5
Control	pH	8.5	8.4
	O2 ppm	8.8	8.6
	Cond.	300	303
	Temp(C)	20.0	20.5

TOXICITY TEST REPORT

Sample: 03900250

TEST CONDITIONS

Company : Du Pont Canada Inc.
Whitby, ONT
(80408)
Region : Central
Industry : Organic Chemical
Control point : Combined Effluent, (200)
Laboratory : BAR
Sampling Method : Grab
Sampled By : T. Pickering
Date Collected : 03/27/90
Received : 03/28/90
Tested : 03/28/90 at: 1615
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	1	8
50	0	0	1	8
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900250

TEST CONC. %	ELAPSED TIME		
	00:00	24:00	48:00
100	pH 8.0	8.0	
	O2 ppm 9.7	8.4	
	Cond. 355	360	
	Temp(C) 19.5	20.0	20.0
50	pH 8.0	8.1	
	O2 ppm 9.4	8.4	
	Cond. 330	331	
	Temp(C) 19.5	20.0	20.0
25	pH 8.1	8.2	
	O2 ppm 9.3	8.5	
	Cond. 316	317	
	Temp(C) 19.5	20.0	20.0
13	pH 8.1	8.2	
	O2 ppm 9.3	8.6	
	Cond. 309	310	
	Temp(C) 19.5	20.0	20.0
6	pH 8.1	8.2	
	O2 ppm 9.6	8.6	
	Cond. 296	308	
	Temp(C) 19.5	20.0	20.0
Control	pH 8.1	8.3	
	O2 ppm 8.9	8.6	
	Cond. 301	305	
	Temp(C) 19.5	20.0	20.0

COMPANY: Esso Chemical Canada, Sarnia
(70201)
SECTOR: Organic Chemical
REGION: Southwest

SUMMARY

The data for twelve trout bioassays, conducted on combined effluent and intake water samples collected between October 1989 and March 1990, were provided by Esso Chemical Canada. All six combined effluent (control point 0300) samples and six intake water samples were determined to have been non-acutely lethal to test fish.

intake water

05890093 sampled: 10/30/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05890119 sampled: 11/22/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05890129 sampled: 12/13/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900010 sampled: 01/10/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900027 sampled: 02/07/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900050 sampled: 03/07/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

process effluent

combined effluent

05890092 sampled: 10/30/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05890120 sampled: 11/22/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

Esso Chemical Canada (continued)

05890128 sampled: 12/13/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900011 sampled: 01/10/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900025 sampled: 02/07/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900051 sampled: 03/07/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

rain gauge

TOXICITY TEST REPORT

Sample: 05890093

TEST CONDITIONS

Company : Esso Chemical Canada
Sarnia, ONT
(70201)
Region : Southwest
Industry : Organic Chemical
Control point : intake water, (100)
Laboratory : Pollutech
Sampling Method : grab
Sampled By : C. Ferguson
Date Collected : 10/30/89
Received : 10/30/89
Tested : 10/31/89 at: 1345
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	20:25	45:25	68:55	97:25	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 05890093

TEST CONC. %		ELAPSED TIME				
		00:00	20:25	45:25	68:55	97:25
100	pH	7.9	7.5	7.6	7.5	7.5
	O2 ppm	10.5	7.5	8.6	8.6	9.8
	Cond.	170				172
	Temp(C)	15.0	15.0	15.0	15.0	15.0
100	pH	7.9	7.4	7.3	7.3	7.5
	O2 ppm	10.6	7.7	6.1	6.1	6.3
	Cond.	170				175
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.0	7.2	7.3	7.3	7.4
	O2 ppm	8.8	7.2	7.6	8.2	8.6
	Cond.	175				175
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.0	7.2	7.3	7.3	7.4
	O2 ppm	8.6	7.6	7.5	7.9	8.6
	Cond.	172				171
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 05890119

TEST CONDITIONS

Company : Esso Chemical Canada
Sarnia, ONT
(70201)
Region : Southwest
Industry : Organic Chemical
Control point : intake water, (100)
Laboratory : Pollutech
Sampling Method : grab
Sampled By : C. Ferguson
Date Collected : 11/22/89
Received : 11/22/89
Tested : 11/22/89 at: 1545
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
%	00:00	21:55	48:25	71:55	96:55	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

TOXICITY TEST PARAMETERS

Sample Number: 05890119

TEST CONC. %		E L A P S E D T I M E				
		00:00	21:55	48:25	71:55	96:55
100	pH	7.8	7.8	7.7	7.7	7.5
	O2 ppm	11.1	9.8	9.0	9.8	9.4
	Cond.	160				170
	Temp(C)	15.0	15.0	15.0	15.0	15.0
100	pH	7.8	7.8	7.7	7.7	7.5
	O2 ppm	11.1	9.6	9.5	9.7	9.4
	Cond.	161				171
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.1	7.8	7.7	7.7	7.5
	O2 ppm	10.0	10.0	9.2	10.0	9.8
	Cond.	165				168
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.2	7.7	7.7	7.7	7.5
	O2 ppm	10.2	9.8	9.1	10.1	10.0
	Cond.	170				168
	Temp(C)	15.0	15.0	15.0	15.0	15.0

MISA Trout

TOXICITY TEST REPORT

Sample: 05890129

TEST CONDITIONS

Company : Esso Chemical Canada
Sarnia, ONT
(70201)
Region : Southwest
Industry : Organic Chemical
Control point : intake water, (100)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : P. Tymstra
Date Collected : 12/13/89
Received : 12/13/89
Tested : 12/14/89 at: 1215
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	23:25	46:25	75:25	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890129

TEST CONC. %	ELAPSED TIME				
	00:00	23:25	46:25	75:25	96:00
100	pH 7.7	7.7	7.7	7.8	7.9
	O2 ppm 11.8	9.6	9.6	8.8	8.8
	Cond. 170				180
	Temp(C) 15.0	15.0	15.0	15.0	15.0
100	pH 7.7	7.6	7.8	7.9	7.9
	O2 ppm 11.6	9.8	9.6	9.3	8.9
	Cond. 171				180
	Temp(C) 15.0	15.0	15.0	15.0	15.0
Control	pH 7.7	7.7	7.8	7.8	7.8
	O2 ppm 11.9	10.3	9.6	9.4	9.2
	Cond. 164				180
	Temp(C) 15.0	15.0	15.0	15.0	15.0
Control	pH 7.7	7.7	7.8	7.8	7.8
	O2 ppm 12.0	10.3	9.8	9.3	9.0
	Cond. 164				180
	Temp(C) 15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 05900010

TEST CONDITIONS

Company : Esso Chemical Canada
Sarnia, ONT
(70201)
Region : Southwest
Industry : Organic Chemical
Control point : intake water, (100)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : P.Tymstra
Date Collected : 01/10/90
Received : 01/10/90
Tested : 01/11/90 at: 1030
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY	
	%	00:00	23:10	54:00	79:10	96:00	%
100	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900010

TEST CONC. %		E L A P S E D T I M E				
		00:00	23:10	54:00	79:10	96:00
100	pH	7.6	7.4	7.6	7.4	7.4
	O2 ppm	11.3	7.5	7.9	8.1	8.2
	Cond.	163				162
	Temp(C)	15.0	15.0	15.0	15.0	15.0
100	pH	7.6	7.5	7.6	7.4	7.5
	O2 ppm	11.4	7.6	7.7	8.0	8.0
	Cond.	164				162
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.5	7.5	7.7	7.4	7.4
	O2 ppm	11.2	8.0	8.2	8.0	8.2
	Cond.	168				166
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.4	7.4	7.6	7.3	7.4
	O2 ppm	10.2	7.8	7.6	8.0	8.2
	Cond.	169				162
	Temp(C)	15.0	15.0	15.0	15.0	15.0

MISA Trout

TOXICITY TEST REPORT

Sample: 05900027

TEST CONDITIONS

Company : Esso Chemical Canada
 Sarnia, ONT
 (70201)
 Region : Southwest
 Industry : Organic Chemical
 Control point : intake water, (100)
 Laboratory : Pollutech
 Sampling Method : Grab
 Sampled By : C.Ferguson
 Date Collected : 02/07/90
 Received : 02/07/90
 Tested : 02/08/90 at: 1500
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	23:00	45:00	73:30	97:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal
 95% fid. limits : 0.0 - 0.0 %
 Comments :

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900027

TEST CONC. %		ELAPSED TIME				
		00:00	23:00	45:00	73:30	97:00
100	pH	7.7	7.6	7.7	7.8	7.7
	O2 ppm	11.2	9.9	9.7	9.6	9.8
	Cond.	168				172
	Temp(C)	15.0	15.0	15.0	15.0	15.0
100	pH	7.7	7.6	7.8	7.8	7.8
	O2 ppm	11.3	10.0	9.9	9.6	9.7
	Cond.	162				168
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.2	7.5	7.6	7.7	7.6
	O2 ppm	10.2	10.0	9.9	9.8	9.6
	Cond.	166				168
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.2	7.6	7.6	7.7	7.6
	O2 ppm	10.2	10.0	9.9	9.8	9.6
	Cond.	166				170
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 05900050

TEST CONDITIONS

Company : Esso Chemical Canada
Sarnia, ONT
(70201)
Region : Southwest
Industry : Organic Chemical

Control point : intake water, (100)

Laboratory : Pollutech
Sampling Method : Grab
Sampled By : T.Moran
Date Collected : 03/07/90
Received : 03/07/90
Tested : 03/08/90 at: 1200

Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
	%	00:00	23:00	47:00	71:00	
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :TOXICITY TEST PARAMETERS

Sample Number: 05900050

TEST CONC.	%	ELAPSED TIME				
		00:00	23:00	47:00	71:00	96:15
100	pH	7.7				7.8
	O2 ppm	11.4				9.2
	Cond.	165				172
	Temp(C)	15.0				15.0
100	pH	7.7				7.8
	O2 ppm	11.6				9.3
	Cond.	165				172
	Temp(C)	15.0				15.0
Control	pH	7.4				7.5
	O2 ppm	10.3				9.4
	Cond.	160				175
	Temp(C)	15.0				15.0
Control	pH	7.4				7.5
	O2 ppm	10.4				9.3
	Cond.	162				174
	Temp(C)	15.0				15.0

TOXICITY TEST REPORT

Sample: 05890092

TEST CONDITIONS

Company : Esso Chemical Canada
Sarnia, ONT
(70201)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (300)
Laboratory : Pollutech
Sampling Method : grab
Sampled By : C. Ferguson
Date Collected : 10/30/89
Received : 10/30/89
Tested : 10/31/89 at: 1400
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	20:00	44:00	68:00	96:30	%
100	0	0	0	0	0	0
75	0	0	0	0	0	0
56	0	0	0	0	0	0
25	0	0	0	0	0	0
10	0	0	0	0	0	0
1	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 05890092

TEST CONC. %	ELAPSED TIME				
	00:00	20:00	44:00	68:00	96:30
100	pH 7.6	7.4	7.4	7.3	7.5
	O2 ppm 7.8	6.6	6.2	7.8	7.8
	Cond. 186				185
	Temp(C) 15.0	15.0	15.0	15.0	15.0
75	pH 7.3	7.3	7.5	7.3	7.5
	O2 ppm 8.3	4.8	5.1	5.2	7.8
	Cond. 183				181
	Temp(C) 15.0	15.0	15.0	15.0	15.0
56	pH 7.2	7.4	7.5	7.5	7.5
	O2 ppm 8.3	6.6	6.6	8.3	8.2
	Cond. 180				180
	Temp(C) 15.0	15.0	15.0	15.0	15.0
25	pH 7.1	7.4	7.5	7.5	7.5
	O2 ppm 8.6	7.5	7.4	8.0	8.8
	Cond. 178				179
	Temp(C) 15.0	15.0	15.0	15.0	15.0
10	pH 7.1	7.4	7.5	7.5	7.5
	O2 ppm 8.8	7.8	7.1	7.4	8.0
	Cond. 174				178
	Temp(C) 15.0	15.0	15.0	15.0	15.0
1	pH 7.1	7.4	7.5	7.5	7.5
	O2 ppm 8.7	8.3	8.0	8.0	9.0
	Cond. 170				178
	Temp(C) 15.0	15.0	15.0	15.0	15.0
Control	pH 7.0	7.2	7.3	7.3	7.4
	O2 ppm 8.8	8.2	7.6	8.2	8.6
	Cond. 176				175
	Temp(C) 15.0	15.0	15.0	15.0	15.0
Control	pH 7.0	7.2	7.3	7.3	7.4
	O2 ppm 8.6	7.6	7.9	7.9	8.6
	Cond. 172				171
	Temp(C) 15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 05890120

TEST CONDITIONS

Company : Esso Chemical Canada
Sarnia, ONT
(70201)
Region : Southwest
Industry : Organic Chemical

Control point : combined effluent, (300)

Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C.Ferguson
Date Collected : 11/22/89
Received : 11/22/89
Tested : 11/22/89 at: 1545

Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	21:55	48:25	72:55	96:55	%
100	0	0	0	0	0	0
75	0	0	0	0	0	0
56	0	0	0	0	0	0
25	0	0	0	0	0	0
10	0	0	0	0	0	0
1	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890120

TEST CONC. %	ELAPSED TIME				
	00:00	21:55	48:25	72:55	96:55
100	pH 7.8	7.7	7.6	7.6	7.6
	O2 ppm 8.6	8.5	7.5	8.9	9.4
	Cond. 221				221
	Temp(C) 15.0	15.0	15.0	15.0	15.0
75	pH 7.6	7.6	7.7	7.7	7.6
	O2 ppm 8.9	8.4	7.4	9.0	9.4
	Cond. 211				211
	Temp(C) 15.0	15.0	15.0	15.0	15.0
56	pH 7.4	7.6	7.7	7.6	7.5
	O2 ppm 9.1	8.2	7.0	9.0	9.6
	Cond. 200				201
	Temp(C) 15.0	15.0	15.0	15.0	15.0
25	pH 7.3	7.6	7.7	7.7	7.6
	O2 ppm 9.5	9.1	8.8	9.8	9.8
	Cond. 181				188
	Temp(C) 15.0	15.0	15.0	15.0	15.0
10	pH 7.3	7.7	7.7	7.7	7.6
	O2 ppm 9.6	8.9	8.9	9.9	9.8
	Cond. 175				180
	Temp(C) 15.0	15.0	15.0	15.0	15.0
1	pH 7.3	7.7	7.7	7.7	7.6
	O2 ppm 9.8	9.1	9.1	9.8	9.5
	Cond. 170				178
	Temp(C) 15.0	15.0	15.0	15.0	15.0
Control	pH 7.1	7.8	7.7	7.7	7.5
	O2 ppm 10.2	10.0	9.2	10.0	9.8
	Cond. 165				168
	Temp(C) 15.0	15.0	15.0	15.0	15.0
Control	pH 7.2	7.7	7.7	7.7	7.5
	O2 ppm 10.2	9.8	9.1	10.1	10.0
	Cond. 170				168
	Temp(C) 15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 05890128

TEST CONDITIONS

Company : Esso Chemical Canada
Sarnia, ONT
(70201)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (300)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : P. Tymstra
Date Collected : 12/13/89
Received : 12/13/89
Tested : 12/14/89 at: 1215
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
	%	00:00	23:25	46:25	75:25	96:00
100	0	0	0	0	0	0
75	0	0	0	0	0	0
56	0	0	0	0	0	0
25	0	0	0	0	0	0
10	0	0	0	0	0	0
1	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890128

TEST CONC.	ELAPSED TIME				
%	00:00	23:25	46:25	75:25	96:00

100	pH	7.6	7.7	7.6	7.8	7.8
	O2 ppm	9.6	9.1	8.4	9.4	8.9
	Cond.	181				199
	Temp(C)	15.0	15.0	15.0	15.0	15.0
75	pH	7.6	7.8	7.7	7.8	7.8
	O2 ppm	10.6	9.6	8.5	8.9	8.8
	Cond.	175				191
	Temp(C)	15.0	15.0	15.0	15.0	15.0
56	pH	7.6	7.8	7.7	7.9	7.8
	O2 ppm	11.4	10.0	9.2	8.8	8.8
	Cond.	176				190
	Temp(C)	15.0	15.0	15.0	15.0	15.0
25	pH	7.5	7.8	7.8	7.8	7.8
	O2 ppm	11.8	9.9	9.1	9.4	9.2
	Cond.	172				185
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.6	7.8	7.8	7.8	7.8
	O2 ppm	12.0	10.2	9.0	9.1	9.1
	Cond.	169				181
	Temp(C)	15.0	15.0	15.0	15.0	15.0
1	pH	7.6	7.8	7.8	7.9	7.8
	O2 ppm	12.0	10.3	9.2	9.1	9.0
	Cond.	168				179
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.7	7.7	7.8	7.8	7.8
	O2 ppm	11.9	10.3	9.6	9.4	9.2
	Cond.	164				180
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.7	7.7	7.8	7.8	7.8
	O2 ppm	12.0	10.3	9.8	9.3	9.0
	Cond.	164				180
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 05900011

TEST CONDITIONS

Company : Esso Chemical Canada
Sarnia, ONT
(70201)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (300)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : P. Tymstra
Date Collected : 01/10/90
Received : 01/10/90
Tested : 01/11/90 at: 1030
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	23:10	54:00	79:10	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

TOXICITY TEST PARAMETERS

Sample Number: 05900011

TEST CONC.		ELAPSED TIME				
%		00:00	23:10	54:00	79:10	96:00
100	pH	7.5	7.4	7.6	7.4	7.4
	O2 ppm	7.0	6.4	7.0	7.5	7.9
	Cond.	211				222
	Temp(C)	15.0	15.0	15.0	15.0	15.0
100	pH	7.5	7.4	7.6	7.7	7.5
	O2 ppm	7.2	6.5	6.9	7.8	8.3
	Cond.	212				222
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.5	7.5	7.7	7.4	7.4
	O2 ppm	10.2	8.0	8.2	8.0	8.2
	Cond.	168				166
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.4	7.4	7.6	7.4	7.4
	O2 ppm	10.2	7.8	7.8	8.0	8.2
	Cond.	169				162
	Temp(C)	15.0	15.0	15.0	15.0	15.0

MISA Trout

TOXICITY TEST REPORT

Sample: 05900025

TEST CONDITIONS

Company : Esso Chemical Canada
Sarnia, ONT
(70201)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (300)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C. Ferguson
Date Collected : 02/07/90
Received : 02/07/90
Tested : 02/08/90 at: 1500
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
	%	00:00	23:00	45:00	73:30	
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900025

TEST CONC. %		ELAPSED TIME				
		00:00	23:00	45:00	73:30	97:00
100	pH	8.2	7.6	7.6	7.5	7.6
	O2 ppm	9.4	9.6	9.0	8.2	7.2
	Cond.	250				255
	Temp(C)	15.0	15.0	15.0	15.0	15.0
100	pH	8.2	7.6	7.6	7.6	7.7
	O2 ppm	9.4	9.7	8.9	8.4	8.2
	Cond.	251				255
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.2	7.5	7.6	7.7	7.6
	O2 ppm	10.2	10.0	9.8	9.8	9.6
	Cond.	166				168
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.2	7.6	7.6	7.7	7.6
	O2 ppm	10.2	10.0	9.9	9.8	9.6
	Cond.	166				170
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 05900051

TEST CONDITIONS

Company : Esso Chemical Canada
Sarnia, ONT
(70201)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (300)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : T. Moran
Date Collected : 03/07/90
Received : 03/07/90
Tested : 03/08/90 at: 1200
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
	%	00:00	23:00	47:00	71:00	96:15
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900051

TEST CONC. %	ELAPSED TIME
	00:00 23:00 47:00 71:00 96:15

100	pH	7.6	7.6
	O2 ppm	8.1	8.5
	Cond.	200	202
	Temp(C)	15.0	15.0
100	pH	7.6	7.6
	O2 ppm	8.3	8.6
	Cond.	205	205
	Temp(C)	15.0	15.0
Control	pH	7.4	7.5
	O2 ppm	10.3	9.4
	Cond.	160	175
	Temp(C)	15.0	15.0
Control	pH	7.4	7.5
	O2 ppm	10.4	9.3
	Cond.	162	174
	Temp(C)	15.0	15.0

COMPANY: Esso Chemical Canada, Sarnia
(70201)
(now with Sarna Chemical Plant)
SECTOR: Organic Chemical
REGION: Southwest

SUMMARY

Data for thirteen *Daphnia magna* acute lethality toxicity tests conducted on samples of intake water and combined effluent collected between October 1989 and March 1990 were submitted by Esso Chemical Canada of Sarnia. All six samples of intake water were not acutely lethal to *Daphnia*.

Six of seven samples of final effluent were not acutely lethal to *Daphnia*. One sample collected in February appears to have been tested in duplicate. One test indicated the sample was toxic with a 48 h LC50 = 70.7%, while the other test was nonlethal.

intake water

05890093	sampled: 10/30/89	non-lethal
95% fid. limits:	0.0 -	0.0 %
comments:		
05890119	sampled: 11/22/89	non-lethal
95% fid. limits:	0.0 -	0.0 %
comments:		
05890129	sampled: 12/13/89	non-lethal
95% fid. limits:	0.0 -	0.0 %
comments:		
05900010	sampled: 01/10/90	non-lethal
95% fid. limits:	0.0 -	0.0 %
comments:		
05900027	sampled: 02/07/90	non-lethal
95% fid. limits:	0.0 -	0.0 %
comments:		
05900050	sampled: 03/07/90	non-lethal
95% fid. limits:	0.0 -	0.0 %
comments:		

Esso Chemical Canada (continued)

process effluent

combined effluent

05890092 sampled: 10/30/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05890120 sampled: 11/22/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05890128 sampled: 12/13/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900011 sampled: 01/10/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900025 sampled: 02/07/90 LC50: 70.7 %
95% fid. limits: 0.0 - 0.0 %
comments:

05900051 sampled: 03/07/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

rain gauge

TOXICITY TEST REPORT

Sample: 05890093

TEST CONDITIONS

Company : Esso Chemical Canada
Sarnia, ONT
(70201)
Region : Southwest
Industry : Organic Chemical
Control point : intake water, (100)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C.Ferguson
Date Collected : 10/30/89
Received : 10/30/89
Tested : 10/30/89 at: 1630
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00 48:15		%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890093

TEST CONC.	ELAPSED TIME	
%	00:00 48:15	

100	pH	8.0	8.0
	O2 ppm	9.8	8.6
	Cond.	198	205
	Temp(C)	20.0	20.0
50	pH	8.1	8.1
	O2 ppm	9.0	8.6
	Cond.	360	358
	Temp(C)	20.0	20.0
26	pH	8.1	8.1
	O2 ppm	9.1	8.6
	Cond.	432	429
	Temp(C)	20.0	20.0
13	pH	8.1	8.3
	O2 ppm	9.0	8.5
	Cond.	475	465
	Temp(C)	20.0	20.0
6	pH	8.1	8.3
	O2 ppm	9.1	8.2
	Cond.	495	480
	Temp(C)	20.0	20.0
Control	pH	7.9	8.3
	O2 ppm	8.8	9.0
	Cond.	490	490
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05890119

TEST CONDITIONS

Company : Esso Chemical Canada
Sarnia, ONT
(70201)
Region : Southwest
Industry : Organic Chemical
Control point : intake water, (100)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C. Ferguson
Date Collected : 11/22/89
Received : 11/22/89
Tested : 11/22/89 at: 1450
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00	48:00	%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890119

TEST CONC. %	ELAPSED TIME	
	00:00	48:00

100	pH	7.9	7.9
	O2 ppm	9.8	9.0
	Cond.	188	195
	Temp(C)	20.0	20.0
50	pH	8.0	8.0
	O2 ppm	9.0	9.0
	Cond.	348	350
	Temp(C)	20.0	20.0
26	pH	8.0	8.0
	O2 ppm	8.7	9.1
	Cond.	420	439
	Temp(C)	20.0	20.0
13	pH	8.1	8.1
	O2 ppm	8.6	8.9
	Cond.	453	460
	Temp(C)	20.0	20.0
6	pH	8.1	8.1
	O2 ppm	8.6	8.8
	Cond.	480	482
	Temp(C)	20.0	20.0
Control	pH	8.1	8.1
	O2 ppm	8.9	8.8
	Cond.	498	510
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05890129

TEST CONDITIONS

Company : Esso Chemical Canada
Sarnia, ONT
(70201)
Region : Southwest
Industry : Organic Chemical
Control point : intake water, (100)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : P. Tymstra
Date Collected : 12/13/89
Received : 12/13/89
Tested : 12/13/89 at: 1645
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00	48:00	%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890129

TEST CONC.	ELAPSED TIME	
%	00:00	48:00

100	pH	7.9	7.8
	O2 ppm	9.3	6.8
	Cond.	214	235
	Temp(C)	20.0	20.0
50	pH	8.0	8.0
	O2 ppm	9.3	7.8
	Cond.	356	370
	Temp(C)	20.0	20.0
26	pH	8.1	8.1
	O2 ppm	9.3	8.0
	Cond.	420	435
	Temp(C)	20.0	20.0
13	pH	8.1	8.2
	O2 ppm	9.4	8.4
	Cond.	448	470
	Temp(C)	20.0	20.0
6	pH	8.1	8.2
	O2 ppm	9.4	8.8
	Cond.	462	485
	Temp(C)	20.0	20.0
Control	pH	8.1	8.3
	O2 ppm	9.4	9.2
	Cond.	488	492
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05900010

TEST CONDITIONS

Company : Esso Chemical Canada
Sarnia, ONT
(70201)
Region : Southwest
Industry : Organic Chemical
Control point : intake water, (100)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : P. Tymstra
Date Collected : 01/10/90
Received : 01/10/90
Tested : 01/10/90 at: 1600
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00	48:00	%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900010

TEST CONC. %	ELAPSED TIME	
	00:00	48:00

100	pH	7.9	7.9
	O2 ppm	11.0	9.0
	Cond.	200	210
	Temp(C)	20.0	20.0
50	pH	8.1	8.1
	O2 ppm	9.8	9.2
	Cond.	348	362
	Temp(C)	20.0	20.0
26	pH	8.2	8.3
	O2 ppm	9.6	9.2
	Cond.	422	418
	Temp(C)	20.0	20.0
13	pH	8.3	8.3
	O2 ppm	9.4	9.2
	Cond.	458	465
	Temp(C)	20.0	20.0
6	pH	8.3	8.3
	O2 ppm	9.4	9.3
	Cond.	478	478
	Temp(C)	20.0	20.0
Control	pH	8.2	8.2
	O2 ppm	9.5	9.5
	Cond.	490	490
	Temp(C)	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT

Sample: 05900027

TEST CONDITIONS

Company : Esso Chemical Canada
Sarnia, ONT
(70201)
Region : Southwest
Industry : Organic Chemical
Control point : intake water, (100)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C.Fergusson
Date Collected : 02/07/90
Received : 02/07/90
Tested : 02/07/90 at: 1525
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00	48:00	%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900027

TEST CONC. %	ELAPSED TIME	
	00:00	48:00

100	pH	7.9	7.9
	O2 ppm	10.2	9.2
	Cond.	200	212
	Temp(C)	20.0	20.0
50	pH	8.1	8.1
	O2 ppm	9.4	9.1
	Cond.	362	368
	Temp(C)	20.0	20.0
26	pH	8.2	8.1
	O2 ppm	9.1	9.0
	Cond.	434	435
	Temp(C)	20.0	20.0
13	pH	8.2	8.1
	O2 ppm	9.0	9.0
	Cond.	470	465
	Temp(C)	20.0	20.0
6	pH	8.2	8.1
	O2 ppm	8.8	9.0
	Cond.	500	500
	Temp(C)	20.0	20.0
Control	pH	8.3	8.1
	O2 ppm	8.8	9.1
	Cond.	510	500
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05900050

TEST CONDITIONS

Company : Esso Chemical Canada
Sarnia, ONT
(70201)
Region : Southwest
Industry : Organic Chemical
Control point : intake water, (100)
Laboratory : Pollutech
Sampling Method : Road
Sampled By : T.Moran
Date Collected : 03/07/90
Received : 03/07/90
Tested : 03/07/90 at: 1505
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00	48:35	%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900050

TEST CONC. %	ELAPSED TIME	
	00:00	48:35

100	pH	8.0	8.0
	O2 ppm	11.0	9.5
	Cond.	208	215
	Temp(C)	20.0	20.0
50	pH	8.3	8.3
	O2 ppm	9.8	9.4
	Cond.	368	355
	Temp(C)	20.0	20.0
26	pH	8.3	8.3
	O2 ppm	9.4	9.4
	Cond.	440	430
	Temp(C)	20.0	20.0
13	pH	8.4	8.4
	O2 ppm	9.4	9.4
	Cond.	472	460
	Temp(C)	20.0	20.0
6	pH	8.4	8.4
	O2 ppm	9.2	9.3
	Cond.	490	478
	Temp(C)	20.0	20.0
Control	pH	8.4	8.3
	O2 ppm	9.2	9.3
	Cond.	500	500
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05890092

TEST CONDITIONS

Company : Esso Chemical Canada
 Sarnia, ONT
 (70201)
 Region : Southwest
 Industry : Organic Chemical

 Control point : combined effluent, (300)

 Laboratory : Pollutech
 Sampling Method : Grab
 Sampled By : C. Ferguson
 Date Collected : 10/30/89
 Received : 10/30/89
 Tested : 10/30/89 at: 1620

 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00 48:25		%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal
 95% fid. limits : 0.0 - 0.0 %
 Comments :

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890092

TEST CONC. %	ELAPSED TIME	
	00:00 48:25	

100	pH	8.0	7.6
	O2 ppm	9.6	7.2
	Cond.	215	217
	Temp(C)	20.0	20.0
50	pH	8.1	7.8
	O2 ppm	8.3	7.1
	Cond.	370	352
	Temp(C)	20.0	20.0
26	pH	8.1	8.1
	O2 ppm	8.4	7.8
	Cond.	440	420
	Temp(C)	20.0	20.0
13	pH	8.1	8.1
	O2 ppm	8.4	7.8
	Cond.	450	450
	Temp(C)	20.0	20.0
6	pH	8.1	8.2
	O2 ppm	8.4	8.4
	Cond.	485	550
	Temp(C)	20.0	20.0
Control	pH	7.9	8.2
	O2 ppm	8.8	9.0
	Cond.	495	490
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05890120

TEST CONDITIONS

Company : Esso Chemical Canada
Sarnia, ONT
(70201)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (300)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C.Ferguson
Date Collected : 11/22/89
Received : 11/22/89
Tested : 11/22/89 at: 1515
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00	48:05	%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890120

TEST CONC. %	ELAPSED TIME	
	00:00	48:05

100	pH	7.9	7.6
	O2 ppm	8.0	7.3
	Cond.	242	258
	Temp(C)	20.0	20.0
50	pH	8.0	7.8
	O2 ppm	8.4	8.2
	Cond.	372	386
	Temp(C)	20.0	20.0
26	pH	8.0	8.0
	O2 ppm	8.5	8.6
	Cond.	432	440
	Temp(C)	20.0	20.0
13	pH	8.0	8.0
	O2 ppm	8.6	8.9
	Cond.	466	466
	Temp(C)	20.0	20.0
6	pH	8.0	8.1
	O2 ppm	8.7	9.0
	Cond.	480	482
	Temp(C)	20.0	20.0
Control	pH	8.1	8.1
	O2 ppm	8.9	9.8
	Cond.	498	505
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05890128

TEST CONDITIONS

Company : Esso Chemical Canada
Sarnia, ONT
(70201)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (300)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : P. Tymstra
Date Collected : 12/13/89
Received : 12/13/89
Tested : 12/16/89 at: 1500
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00 48:30		%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
1	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890128

TEST CONC. %	ELAPSED TIME	
	00:00 48:30	

100	pH	7.8	8.1
	O2 ppm	9.4	8.8
	Cond.	200	205
	Temp(C)	20.0	20.0
50	pH	8.0	8.3
	O2 ppm	9.3	8.8
	Cond.	355	350
	Temp(C)	20.0	20.0
26	pH	8.1	8.4
	O2 ppm	9.3	8.9
	Cond.	430	420
	Temp(C)	20.0	20.0
13	pH	8.1	4.0
	O2 ppm	9.3	9.1
	Cond.	460	460
	Temp(C)	20.0	20.0
1	pH	8.1	8.4
	O2 ppm	9.2	9.0
	Cond.	480	475
	Temp(C)	20.0	20.0
Control	pH	8.0	8.2
	O2 ppm	9.3	9.4
	Cond.	490	488
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05900011

TEST CONDITIONS

Company : Esso Chemical Canada
Sarnia, ONT
(70201)
Region : Southwest
Industry : Organic Chemical

Control point : combined effluent, (300)

Laboratory : Pollutech
Sampling Method : Grab
Sampled By : P.Tymstra
Date Collected : 01/10/90
Received : 01/10/90
Tested : 01/10/90 at: 1600

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00 48:15		%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900011

TEST CONC.	ELAPSED TIME	
%	00:00 48:15	

100	pH	7.9	7.6
	O2 ppm	8.0	5.8
	Cond.	244	220
	Temp(C)	20.0	20.0
50	pH	8.1	7.8
	O2 ppm	9.0	6.5
	Cond.	364	387
	Temp(C)	20.0	20.0
26	pH	8.2	8.0
	O2 ppm	9.0	8.2
	Cond.	432	445
	Temp(C)	20.0	20.0
13	pH	8.3	8.1
	O2 ppm	9.0	9.0
	Cond.	460	471
	Temp(C)	20.0	20.0
6	pH	8.3	8.0
	O2 ppm	9.0	9.3
	Cond.	470	481
	Temp(C)	20.0	20.0
Control	pH	8.2	8.2
	O2 ppm	9.5	9.7
	Cond.	490	480
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05900025

TEST CONDITIONS

Company : Esso Chemical Canada
 : Sarnia, ONT
 : (70201)
 Region : Southwest
 Industry : Organic Chemical

 Control point : combined effluent, (300)

 Laboratory : Pollutech
 Sampling Method : Grab
 Sampled By : C. Fergusson
 Date Collected : 02/07/90
 Received : 02/07/90
 Tested : 02/07/90 at: 1540

 Type of Bioassay : STATIC
 : (Daphnia magna Acute Lethality Toxicity
 : Test Protocol. OME, 1988)

 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00 48:00		%
100	0	12	100
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : 70.7 %
 95% fid. limits : 0.0 - 0.0 %
 Comments :

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900025

TEST CONC.	ELAPSED TIME	
%	00:00 48:00	

100	pH	8.2	7.6
	O2 ppm	9.1	5.2
	Cond.	302	310
	Temp(C)	20.0	20.0
50	pH	8.2	7.8
	O2 ppm	9.0	7.0
	Cond.	418	410
	Temp(C)	20.0	20.0
26	pH	8.2	8.1
	O2 ppm	8.8	8.4
	Cond.	464	450
	Temp(C)	20.0	20.0
13	pH	8.2	8.1
	O2 ppm	8.8	9.0
	Cond.	490	495
	Temp(C)	20.0	20.0
6	pH	8.2	8.1
	O2 ppm	8.8	9.1
	Cond.	498	500
	Temp(C)	20.0	20.0
Control	pH	8.3	8.1
	O2 ppm	8.8	9.0
	Cond.	510	510
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05900051

TEST CONDITIONS

Company : Esso Chemical Canada
Sarnia, ONT
(70201)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (300)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : T.Moran
Date Collected : 03/07/90
Received : 03/07/90
Tested : 03/07/90 at: 1525
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00	48:05	%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900051

TEST CONC.	ELAPSED TIME	
%	00:00	48:05

100	pH	8.0	7.7
	O2 ppm	8.8	6.5
	Cond.	250	250
	Temp(C)	20.0	20.0
50	pH	8.3	8.1
	O2 ppm	8.8	8.2
	Cond.	388	382
	Temp(C)	20.0	20.0
26	pH	8.3	8.2
	O2 ppm	9.0	8.4
	Cond.	450	440
	Temp(C)	20.0	20.0
13	pH	8.4	8.3
	O2 ppm	9.0	9.0
	Cond.	482	470
	Temp(C)	20.0	20.0
6	pH	8.4	8.3
	O2 ppm	9.0	9.2
	Cond.	498	480
	Temp(C)	20.0	20.0
Control	pH	8.4	8.4
	O2 ppm	9.2	9.3
	Cond.	500	492
	Temp(C)	20.0	20.0

COMPANY: Ethyl Canada Inc., Corunna
(120006)
SECTOR: Organic Chemical
REGION: Southwest

SUMMARY

The data for six trout bioassays, conducted on combined effluent samples collected between October 1989 to March 1990, were provided by Ethyl Canada Incorporated. All six samples of combined effluent collected from control point 0100 were determined to have been non-acutely lethal to test fish.

combined effluent

05890084 sampled: 10/10/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05890105 sampled: 11/14/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05890125 sampled: 12/12/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900018 sampled: 01/16/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900032 sampled: 02/13/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900054 sampled: 03/13/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

process effluent

process effluent

storm water

Ethyl Canada Inc. (continued)

storm water

storm water

rain gauge

intake water

TOXICITY TEST REPORT

Sample: 05890084

TEST CONDITIONS

Company : Ethyl Canada Inc.
 Corunna, ONT
 (120006)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : Pollutech
 Sampling Method : Grab
 Sampled By : C.Ferguson
 Date Collected : 10/10/89
 Received : 10/10/89
 Tested : 10/11/89 at: 1200
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	45:30	76:00	96:00	%
100	0	0	0	0	0	0
75	0	0	0	0	0	0
56	0	0	0	0	0	0
25	0	0	0	0	0	0
10	0	0	0	0	0	0
1	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890084

TEST CONC.	ELAPSED TIME				
%	00:00	24:00	45:30	76:00	96:00

100	pH	9.0	8.2	7.7	7.6	7.5
	O2 ppm	9.8	8.8	8.2	8.6	8.5
	Cond.	1100				1100
	Temp(C)	15.0	15.0	15.0	15.0	15.0
75	pH	8.7	7.9	7.6	7.6	7.5
	O2 ppm	9.4	8.1	8.1	8.8	8.5
	Cond.	820				870
	Temp(C)	15.0	15.0	15.0	15.0	15.0
56	pH	9.1	7.7	7.5	7.5	7.4
	O2 ppm	9.0	8.6	8.2	8.3	8.2
	Cond.	600				610
	Temp(C)	15.0	15.0	15.0	15.0	15.0
25	pH	7.4	7.7	7.5	7.5	7.5
	O2 ppm	8.4	9.4	8.9	8.2	9.0
	Cond.	380				390
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.2	7.5	7.4	7.4	7.3
	O2 ppm	8.0	8.7	8.3	8.5	8.2
	Cond.	240				250
	Temp(C)	15.0	15.0	15.0	15.0	15.0
1	pH	7.1	7.4	7.3	7.4	7.3
	O2 ppm	8.0	8.1	7.6	8.0	7.8
	Cond.	180				185
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	6.9	7.4	7.3	7.3	7.2
	O2 ppm	8.0	9.2	8.5	8.8	9.0
	Cond.	170				175
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	6.9	7.4	7.3	7.3	7.3
	O2 ppm	7.8	9.2	8.5	8.9	8.8
	Cond.	170				175
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 05890105

TEST CONDITIONS

Company : Ethyl Canada Inc.
Corunna, ONT
(120006)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (100)
Laboratory : Pollutech
Sampling Method : grab
Sampled By : C. Ferguson
Date Collected : 11/14/89
Received : 11/14/89
Tested : 11/14/89 at: 1330
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	23:10	45:10	69:10	96:00	%
100	0	0	0	0	0	0
75	0	0	0	0	0	0
56	0	0	0	0	0	0
25	0	0	0	0	0	0
10	0	0	0	0	0	0
1	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

TOXICITY TEST PARAMETERS

Sample Number: 05890105

TEST CONC.	ELAPSED TIME				
%	00:00	23:10	45:10	69:10	96:00
100	pH 7.5	7.7	7.7	7.7	7.8
	O2 ppm 10.4	8.7	9.2	9.5	9.4
	Cond. 2650				2680
	Temp(C) 15.0	15.0	15.0	15.0	15.0
75	pH 7.5	7.7	7.7	7.7	7.8
	O2 ppm 10.1	8.8	9.4	9.9	9.7
	Cond. 2110				2040
	Temp(C) 15.0	15.0	15.0	15.0	15.0
56	pH 7.4	7.7	7.7	7.8	7.9
	O2 ppm 10.0	9.0	9.6	10.4	10.0
	Cond. 1190				1110
	Temp(C) 15.0	15.0	15.0	15.0	15.0
25	pH 7.3	7.7	7.7	7.8	7.8
	O2 ppm 9.7	9.2	9.4	10.3	9.9
	Cond. 900				890
	Temp(C) 15.0	15.0	15.0	15.0	15.0
10	pH 7.3	7.7	7.7	7.8	7.8
	O2 ppm 9.8	9.0	9.3	10.1	10.0
	Cond. 510				510
	Temp(C) 15.0	15.0	15.0	15.0	15.0
1	pH 7.2	7.7	7.7	7.8	7.8
	O2 ppm 9.7	9.0	9.3	10.0	9.4
	Cond. 190				190
	Temp(C) 15.0	15.0	15.0	15.0	15.0
Control	pH 7.2	7.6	7.7	7.7	7.8
	O2 ppm 10.0	9.9	9.9	10.4	10.2
	Cond. 169				169
	Temp(C) 15.0	15.0	15.0	15.0	15.0
Control	pH 7.2	7.6	7.7	7.8	7.6
	O2 ppm 9.8	9.9	9.8	10.0	9.9
	Cond. 169				172
	Temp(C) 15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 05890125

TEST CONDITIONS

Company : Ethyl Canada Inc.
Corunna, ONT
(120006)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (100)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : P.Tymstra
Date Collected : 12/12/89
Received : 12/12/89
Tested : 12/13/89 at: 1700
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	18:00	41:00	65:00	96:00	%
100	0	0	0	0	0	0
75	0	0	0	0	0	0
56	0	0	0	0	0	0
25	0	0	0	0	0	0
10	0	0	0	0	0	0
1	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890125

TEST CONC.	%	ELAPSED TIME				
		00:00	18:00	41:00	65:00	96:00
100	pH	6.7	7.1	7.4	7.5	7.5
	O2 ppm	10.3	9.0	9.2	9.3	9.2
	Cond.	1400				1460
	Temp(C)	15.0	15.0	15.0	15.0	15.0
75	pH	6.9	7.2	7.6	7.6	7.6
	O2 ppm	10.6	9.2	9.4	9.4	9.3
	Cond.	1100				1140
	Temp(C)	15.0	15.0	15.0	15.0	15.0
56	pH	7.2	7.4	7.7	7.6	7.7
	O2 ppm	11.2	9.4	9.5	9.4	9.4
	Cond.	900				920
	Temp(C)	15.0	15.0	15.0	15.0	15.0
25	pH	7.4	7.5	7.7	7.7	7.8
	O2 ppm	11.5	9.3	9.4	9.4	9.3
	Cond.	490				540
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.6	7.6	7.8	7.7	7.9
	O2 ppm	11.6	9.6	9.5	9.4	8.9
	Cond.	284				298
	Temp(C)	15.0	15.0	15.0	15.0	15.0
1	pH	7.7	7.6	7.8	7.7	8.0
	O2 ppm	11.5	9.6	9.6	9.6	9.3
	Cond.	165				188
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.7	7.5	7.8	7.9	8.0
	O2 ppm	11.4	9.8	9.9	9.8	9.6
	Cond.	165				174
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.7	7.5	7.9	7.9	8.0
	O2 ppm	11.5	9.8	10.0	9.6	9.6
	Cond.	165				174
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 05900018

TEST CONDITIONS

Company : Ethyl Canada Inc.
Corunna, ONT
(120006)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (100)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : P. Tymstra
Date Collected : 01/16/90
Received : 01/16/90
Tested : 01/16/90 at: 1200
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	21:00	45:30	76:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900018

TEST CONC. %		ELAPSED TIME				
		00:00	21:00	45:30	76:00	96:00
100	pH	7.7	7.6	7.8	7.7	7.6
	O2 ppm	12.4	8.5	8.8	9.2	9.4
	Cond.	650				620
	Temp(C)	15.0	15.0	15.0	15.0	15.0
100	pH	7.7	7.6	7.8	7.7	7.6
	O2 ppm	12.4	8.8	8.9	9.0	9.6
	Cond.	600				600
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.7	7.6	7.6	7.5	7.4
	O2 ppm	10.0	8.7	9.0	9.4	9.2
	Cond.	181				181
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.7	7.5	7.5	7.5	7.4
	O2 ppm	10.0	8.5	8.7	9.2	9.0
	Cond.	180				182
	Temp(C)	15.0	15.0	15.0	15.0	15.0

MISA Trout

TOXICITY TEST REPORT

Sample: 05900032

TEST CONDITIONS

Company : Ethyl Canada Inc.
Corunna, ONT
(120006)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (100)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C.Ferguson
Date Collected : 02/13/90
Received : 02/13/90
Tested : 02/14/90 at: 1500
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
%	00:00	25:00	43:00	67:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900032

TEST E L A P S E D T I M E
CONC. % 00:00 25:00 43:00 67:00 96:00

100	pH	7.0	7.7
	O2 ppm	9.8	9.0
	Cond.	1950	2010
	Temp(C)	15.0	15.0
100	pH	7.0	7.8
	O2 ppm	9.7	9.0
	Cond.	1910	2000
	Temp(C)	15.0	15.0
Control	pH	7.6	7.7
	O2 ppm	10.0	9.6
	Cond.	158	175
	Temp(C)	15.0	15.0
Control	pH	7.6	7.7
	O2 ppm	10.2	9.6
	Cond.	160	175
	Temp(C)	15.0	15.0

TOXICITY TEST REPORT

Sample: 05900054

TEST CONDITIONS

Company : Ethyl Canada Inc.
 Corunna, ONT
 (120006)
 Region : Southwest
 Industry : Organic Chemical

Control point : combined effluent, (100)

Laboratory : Pollutech
 Sampling Method : Grab
 Sampled By : C. Ferguson
 Date Collected : 03/13/90
 Received : 03/13/90
 Tested : 03/14/90 at: 1220

Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
	%	00:00	25:10	47:30	71:20	
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900054

TEST CONC.	%	ELAPSED TIME				
		00:00	25:10	47:30	71:20	96:00
100	pH	7.1				7.5
	O2 ppm	10.0				9.2
	Cond.	2190				2150
	Temp(C)	15.0				15.0
100	pH	7.1				7.5
	O2 ppm	10.1				9.4
	Cond.	2180				2180
	Temp(C)	15.0				15.0
Control	pH	7.4				7.7
	O2 ppm	10.2				9.3
	Cond.	176				178
	Temp(C)	15.0				15.0
Control	pH	7.4				7.7
	O2 ppm	10.2				9.5
	Cond.	177				178
	Temp(C)	15.0				15.0

COMPANY: Ethyl Canada Inc., Corunna
(120006)
SECTOR: Organic Chemical
REGION: Southwest

SUMMARY

Data for six *Daphnia magna* acute lethality toxicity tests conducted on samples of combined effluent collected between October 1989 and March 1990 was submitted by Ethyl Canada Inc. of Corunna. Two of the six samples were not acutely lethal to *Daphnia*. One sample generated an unusual toxicity response in which the highest mortalities occurred in the middle concentrations of effluent.

combined effluent

05890084	sampled: 10/10/89	LC50: >100 %
	95% fid. limits: 0.0 -	0.0 %
	comments:	
05890105	sampled: 11/14/89	LC50: INVALID
	95% fid. limits: 0.0 -	0.0 % slope:
	comments:	
05890125	sampled: 12/12/89	LC50: >100 %
	95% fid. limits: 0.0 -	0.0 %
	comments:	
05900018	sampled: 01/16/90	non-lethal
	95% fid. limits: 0.0 -	0.0 %
	comments: Duplicate Tested	
05900032	sampled: 02/13/90	non-lethal
	95% fid. limits: 0.0 -	0.0 %
	comments:	
05900054	sampled: 03/13/90	LC50: >100 %
	95% fid. limits: 0.0 -	0.0 %
	comments:	

process effluent

Ethyl Canada Inc. (continued)

process effluent

storm water

storm water

storm water

rain gauge

intake water

TOXICITY TEST REPORT

Sample: 05890084

TEST CONDITIONS

Company : Ethyl Canada Inc.
Corunna, ONT
(120006)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (100)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C.Ferguson
Date Collected : 10/10/89
Received : 10/10/89
Tested : 10/10/89 at: 1525
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00 48:05		%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	2	16
Control	0	0	0

48 Hour LC50 : >100%
95% fid. limits : 0.0 - 0.0 %
Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890084

TEST CONC.	ELAPSED TIME	
%	00:00 48:05	

100	pH	8.9	8.1
	O2 ppm	9.6	9.0
	Cond.	1140	1210
	Temp(C)	20.0	20.0
50	pH	8.5	8.0
	O2 ppm	9.4	9.1
	Cond.	890	890
	Temp(C)	20.0	20.0
26	pH	8.3	8.0
	O2 ppm	9.4	9.0
	Cond.	680	700
	Temp(C)	20.0	20.0
13	pH	8.2	8.0
	O2 ppm	9.2	9.1
	Cond.	600	610
	Temp(C)	20.0	20.0
6	pH	8.2	8.0
	O2 ppm	9.2	9.0
	Cond.	560	595
	Temp(C)	20.0	20.0
Control	pH	8.0	7.9
	O2 ppm	9.6	9.2
	Cond.	500	510
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05890105

TEST CONDITIONS

Company : Ethyl Canada Inc.
Corunna, ONT
(120006)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (100)
Laboratory : Pollutech
Sampling Method : grab
Sampled By : C. Ferguson
Date Collected : 11/14/89
Received : 11/14/89
Tested : 11/14/89 at: 1205
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00	48:10	%
100	0	12	100
50	0	2	16
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	2	16

48 Hour LC50 : INVALID

95% fid. limits : 0.0 - 0.0 %

Comments :

TOXICITY TEST PARAMETERS

Sample Number: 05890105

TEST CONC.	ELAPSED TIME	
%	00:00	48:10

100	pH	7.7	7.9
	O2 ppm	9.7	8.8
	Cond.	2700	2810
	Temp(C)	20.0	20.0
50	pH	7.9	8.1
	O2 ppm	9.4	8.6
	Cond.	1620	1640
	Temp(C)	20.0	20.0
26	pH	8.0	8.1
	O2 ppm	9.2	8.6
	Cond.	1090	1090
	Temp(C)	20.0	20.0
13	pH	8.1	8.2
	O2 ppm	9.3	8.9
	Cond.	790	795
	Temp(C)	20.0	20.0
6	pH	8.1	8.3
	O2 ppm	9.4	9.3
	Cond.	605	605
	Temp(C)	20.0	20.0
Control	pH	7.9	8.3
	O2 ppm	9.7	9.2
	Cond.	480	485
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05890125

TEST CONDITIONS

Company : Ethyl Canada Inc.
 Corunna, ONT
 (120006)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : Pollutech
 Sampling Method : Grab
 Sampled By : P.Tymstra
 Date Collected : 12/12/89
 Received : 12/12/89
 Tested : 12/12/89 at: 1430
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00	48:00	%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	2	16
Control	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890125

TEST CONC. %	ELAPSED TIME	
	00:00	48:00

100	pH	7.0	7.2
	O2 ppm	9.6	9.2
	Cond.	1590	1540
	Temp(C)	20.0	20.0
50	pH	7.2	7.6
	O2 ppm	9.6	9.1
	Cond.	1030	1010
	Temp(C)	20.0	20.0
26	pH	7.4	7.8
	O2 ppm	9.5	9.3
	Cond.	790	790
	Temp(C)	20.0	20.0
13	pH	7.6	7.9
	O2 ppm	9.5	9.3
	Cond.	640	610
	Temp(C)	20.0	20.0
6	pH	7.8	8.0
	O2 ppm	9.5	9.4
	Cond.	580	530
	Temp(C)	20.0	20.0
Control	pH	8.0	8.0
	O2 ppm	9.5	9.5
	Cond.	470	480
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05900018

TEST CONDITIONS

Company : Ethyl Canada Inc.
 Corunna, ONT
 (120006)
 Region : Southwest
 Industry : Organic Chemical

Control point : combined effluent, (100)

Laboratory : Pollutech
 Sampling Method : Grab
 Sampled By : P. Tymstra
 Date Collected : 01/16/90
 Received : 01/16/90
 Tested : 01/16/90 at: 1130

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00	48:00	%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Duplicate Tested

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900018

TEST CONC.	ELAPSED TIME	
%	00:00	48:00

100	pH	7.8	7.9
	O2 ppm	10.5	9.2
	Cond.	630	690
	Temp(C)	20.0	20.0
50	pH	8.1	8.1
	O2 ppm	9.6	9.2
	Cond.	590	600
	Temp(C)	20.0	20.0
26	pH	8.2	8.1
	O2 ppm	9.3	9.2
	Cond.	525	530
	Temp(C)	20.0	20.0
13	pH	8.2	8.1
	O2 ppm	9.2	9.1
	Cond.	515	510
	Temp(C)	20.0	20.0
6	pH	8.2	8.1
	O2 ppm	9.2	9.2
	Cond.	510	505
	Temp(C)	20.0	20.0
Control	pH	8.2	8.1
	O2 ppm	9.2	9.3
	Cond.	488	498
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05900032

TEST CONDITIONS

Company : Ethyl Canada Inc.
 Corunna, ONT
 (120006)
 Region : Southwest
 Industry : Organic Chemical

Control point : combined effluent, (100)

Laboratory : Pollutech
 Sampling Method : Grab
 Sampled By : C. Ferguson
 Date Collected : 02/13/90
 Received : 02/13/90
 Tested : 02/13/90 at: 1710

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00 48:00		%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900032

TEST CONC. %	ELAPSED TIME
	00:00 48:00

100	pH	7.1	7.6
	O2 ppm	10.2	8.1
	Cond.	2100	2180
	Temp(C)	20.0	20.0
50	pH	7.7	8.0
	O2 ppm	9.8	8.2
	Cond.	1300	1310
	Temp(C)	20.0	20.0
26	pH	8.1	8.1
	O2 ppm	9.3	8.1
	Cond.	920	950
	Temp(C)	20.0	20.0
13	pH	8.3	8.3
	O2 ppm	9.2	8.6
	Cond.	710	720
	Temp(C)	20.0	20.0
6	pH	8.4	8.3
	O2 ppm	9.2	8.9
	Cond.	595	610
	Temp(C)	20.0	20.0
Control	pH	8.4	8.3
	O2 ppm	9.2	9.2
	Cond.	480	490
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05900054

TEST CONDITIONS

Company : Ethyl Canada Inc.
 Corunna, ONT
 (120006)
 Region : Southwest
 Industry : Organic Chemical

Control point : combined effluent, (100)

Laboratory : Pollutech
 Sampling Method : Grab
 Sampled By : C. Fergusson
 Date Collected : 03/13/90
 Received : 03/13/90
 Tested : 03/13/90 at: 1630

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00	48:00	%
100	0	0	0
50	0	0	0
26	0	1	8
13	0	4	33
6	0	2	16
Control	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900054

TEST CONC.	ELAPSED TIME	
%	00:00	48:00

100	pH	7.3	7.7
	O2 ppm	10.2	9.1
	Cond.	2540	2510
	Temp(C)	20.0	20.0
50	pH	7.6	8.0
	O2 ppm	9.5	9.0
	Cond.	1520	1520
	Temp(C)	20.0	20.0
26	pH	7.8	8.0
	O2 ppm	9.5	9.0
	Cond.	1020	1020
	Temp(C)	20.0	20.0
13	pH	8.0	8.2
	O2 ppm	9.4	9.0
	Cond.	780	710
	Temp(C)	20.0	20.0
6	pH	8.1	8.2
	O2 ppm	8.4	8.9
	Cond.	620	605
	Temp(C)	20.0	20.0
Control	pH	8.1	8.2
	O2 ppm	10.0	8.9
	Cond.	500	520
	Temp(C)	20.0	20.0

COMPANY: GE Plastics Canada Ltd., Cobourg
(600007)
SECTOR: Organic Chemical
REGION: Central

SUMMARY

The data for eight trout bioassays, conducted on combined effluent and once through cooling water samples collected between October 1989 and March 1990, were provided by GE Plastics Canada Limited. Five of the six combined effluent samples were determined to have been acutely lethal to test fish. Statistically, the percentage effluent required to kill 50 % of the test fish by the end of the four days exposure were 49.9 % (November), 37.0 % (December), 80.6 % (January), 28.1 % (February) and 14.1 % (March). The other two combined effluent samples were determined to have been non-acutely lethal. Two samples of once through cooling water were determined to have been non-acutely lethal.

combined effluent

06890988	sampled: 10/10/89	non-lethal
95% fid. limits:	0.0 -	0.0 %
comments:		
06891084	sampled: 11/14/89	LC50: 49.9 %
95% fid. limits:	43.7 -	56.9 %
comments:		
06891272	sampled: 12/12/89	LC50: 37.0 %
95% fid. limits:	33.9 -	40.3 %
comments:		
06900029	sampled: 01/09/90	LC50: 80.6 %
95% fid. limits:	100.0 -	65.0 %
comments:	100% MORTALITY IN FULL STRENGTH EFFLUENT.	
06900265	sampled: 02/13/90	LC50: 28.1 %
95% fid. limits:	24.6 -	32.1 %
comments:	70% MORTALITY IN 30% TEST CONCENTRATION	
06900388	sampled: 03/13/90	LC50: 14.1 %
95% fid. limits:	10.3 -	17.2 %
comments:	90% MORTALITY IN 20% TEST CONCENTRATION	

GE Plastics Canada Ltd. (continued)

storm water

storm water

OT cooling water

06891147 sampled: 11/27/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

06900031 sampled: 01/09/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

intake water

TOXICITY TEST REPORT

Sample: 06890988

TEST CONDITIONS

Company : GE Plastics Canada Ltd.
Cobourg, ONT
(600007)
Region : Central
Industry : Organic Chemical
Control point : combined effluent, (100)
Laboratory : BEAK
Sampling Method : GRAB
Sampled By : ROB EAKINS
Date Collected : 10/10/89
Received : 10/10/89
Tested : 10/10/89 at: 1700
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
	%	00:00	24:00	48:00	72:00	96:00
100	0	0	0	0	0	0
65	0	0	0	0	0	0
50	0	0	0	0	0	0
30	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : MOVING AVERAGE

TOXICITY TEST PARAMETERS

Sample Number: 06890988

TEST E L A P S E D T I M E
CONC. % 00:00 24:00 48:00 72:00 96:00

100	pH	6.9	7.4	7.5	7.5	7.8
	O2 ppm	8.2	9.2	9.4	9.2	9.0
	Cond.	2400				2250
	Temp(C)	15.0	15.0	15.0	15.0	15.0
65	pH	7.2	7.6	7.7	7.6	7.9
	O2 ppm	8.4	9.0	8.7	8.7	9.1
	Cond.	1763				1724
	Temp(C)	15.0	15.0	15.0	15.0	15.0
50	pH	7.3	7.8	7.9	7.8	7.9
	O2 ppm	8.7	9.0	9.0	9.7	9.2
	Cond.	1442				1396
	Temp(C)	15.0	15.0	15.0	15.0	15.0
30	pH	7.4	7.9	7.9	7.9	7.9
	O2 ppm	8.9	9.1	9.4	9.7	9.4
	Cond.	1073				986
	Temp(C)	15.0	15.0	15.0	15.0	15.0
20	pH	7.4	7.7	7.9	7.8	7.9
	O2 ppm	9.1	9.0	9.2	8.9	9.3
	Cond.	849				802
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.5	8.0	7.9	7.1	8.0
	O2 ppm	8.8	9.3	9.4	9.7	9.1
	Cond.	585				541
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.6	7.9	7.8	7.9	8.0
	O2 ppm	9.3	8.9	8.4	8.9	9.2
	Cond.	347				348
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 06891084

TEST CONDITIONS

Company : GE Plastics Canada Ltd.
Cobourg, ONT
(600007)
Region : Central
Industry : Organic Chemical
Control point : combined effluent, (100)
Laboratory : BEAK
Sampling Method : GRAB
Sampled By : PAUL HERRIOT
Date Collected : 11/14/89
Received : 11/15/89
Tested : 11/15/89 at: 1430
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0
10	0	0	0	0	0	0
20	0	0	0	0	0	0
30	0	0	0	0	0	0
50	0	3	3	4	4	40
65	0	10	10	10	10	100
100	0	10	10	10	10	100

96 Hour LC50 : 49.9 %

95% fid. limits : 43.7 - 56.9 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : SPEARMAN KARBEN

TOXICITY TEST PARAMETERS

Sample Number: 06891084

TEST ELAPSED TIME
CONC. % 00:00 24:00 48:00 72:00 96:00

Control	pH	7.3	8.2	8.1	8.0	8.0
	O2 ppm	8.8	8.8	9.4	10.2	10.0
	Cond.	367				334
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.6	8.2	8.2	8.0	8.1
	O2 ppm	8.5	8.8	10.0	10.0	8.4
	Cond.	576				550
	Temp(C)	15.0	15.0	15.0	15.0	15.0
20	pH	7.6	8.3	8.2	8.0	8.2
	O2 ppm	9.3	8.7	10.4	10.0	8.9
	Cond.	816				801
	Temp(C)	15.0	15.0	15.0	15.0	15.0
30	pH	7.6	8.1	8.2	8.0	8.2
	O2 ppm	8.9	8.3	10.1	10.3	9.0
	Cond.	1013				979
	Temp(C)	15.0	15.0	15.0	15.0	15.0
50	pH	7.6	8.2	8.2	8.0	8.2
	O2 ppm	8.9	8.2	10.0	10.2	9.4
	Cond.	1431				1308
	Temp(C)	15.0	15.0	15.0	15.0	15.0
65	pH	7.6	8.2			
	O2 ppm	8.8	8.3			
	Cond.	1797				
	Temp(C)	15.0	15.0			
100	pH	7.5	7.9			
	O2 ppm	8.8	8.2			
	Cond.	2530				
	Temp(C)	15.0	15.0			

MISA Trout

TOXICITY TEST REPORT

Sample: 06891272

TEST CONDITIONS

Company : GE Plastics Canada Ltd.
 Cobourg, ONT
 (600007)
 Region : Central
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : BEAK
 Sampling Method : GRAB
 Sampled By : PAUL HERRIOT
 Date Collected : 12/12/89
 Received : 12/13/89
 Tested : 12/13/89 at: 1715
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY	
	%	00:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0		0
10	0	0	0	0	0		0
20	0	0	0	0	0		0
30	0	1	1	1	1		10
50	0	10	10	10	10		100
65	0	10	10	10	10		100
100	0	10	10	10	10		100

96 Hour LC50 : 37.0 %

95% fid. limits : 33.9 - 40.3 %

Comments :

SLOPE of Mortality Curve :
 LC50 Calculated By : SPEARMAN-KARBER

TOXICITY TEST PARAMETERS

Sample Number: 06891272

TEST CONC.	ELAPSED TIME				
%	00:00	24:00	48:00	72:00	96:00

Control	pH	7.8	7.9	7.9	8.0	8.0
	O2 ppm	9.5	8.4	9.2	8.9	9.0
	Cond.	358				341
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.8	8.1	8.1	8.1	8.1
	O2 ppm	9.3	8.2	8.7	8.9	8.7
	Cond.	550				585
	Temp(C)	15.0	15.0	15.0	15.0	15.0
20	pH	7.8	8.2	8.2	8.2	8.2
	O2 ppm	8.9	8.8	8.6	8.9	8.9
	Cond.	773				769
	Temp(C)	15.0	15.0	15.0	15.0	15.0
30	pH	7.8	8.2	8.2	8.1	8.2
	O2 ppm	9.1	8.8	8.7	8.7	8.6
	Cond.	1020				1052
	Temp(C)	15.0	15.0	15.0	15.0	15.0
50	pH	7.9	8.4			
	O2 ppm	9.4	9.3			
	Cond.	1386	1596			
	Temp(C)	15.0	15.0			
65	pH	7.8	8.0			
	O2 ppm	8.8	8.3			
	Cond.	1643	1890			
	Temp(C)	15.0	15.0			
100	pH	7.8	8.1			
	O2 ppm	9.0	8.8			
	Cond.	2430	2540			
	Temp(C)	15.0	15.0			

TOXICITY TEST REPORT

Sample: 06900029

TEST CONDITIONS

Company : GE Plastics Canada Ltd.
 Cobourg, ONT
 (600007)
 Region : Central
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : BEAK
 Sampling Method : GRAB
 Sampled By : PAUL HARIOTT
 Date Collected : 01/09/90
 Received : 01/10/90
 Tested : 01/10/90 at: 1430

Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY	
	%	00:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	10	10	10	10	10	100

96 Hour LC50 : 80.6 %

95% fid. limits : 100.0 - 65.0 %

Comments : 100% MORTALITY IN FULL STRENGTH EFFLUENT.

SLOPE of Mortality Curve :
 LC50 Calculated By : BINOMIAL

TOXICITY TEST PARAMETERS

Sample Number: 06900029

TEST CONC. %		ELAPSED TIME				
		00:00	24:00	48:00	72:00	96:00
Control	pH	7.4	7.7	7.7	7.7	7.6
	O2 ppm	8.9	8.4	9.2	10.1	9.0
	Cond.	363				362
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.7	7.7	7.7	7.6	7.5
	O2 ppm	9.5	8.6	9.4	9.2	8.0
	Cond.	560				548
	Temp(C)	15.0	15.0	15.0	15.0	15.0
20	pH	7.7	7.8	7.8	7.6	7.8
	O2 ppm	9.8	8.6	9.3	8.9	9.0
	Cond.	775				776
	Temp(C)	15.0	15.0	15.0	15.0	15.0
30	pH	7.7	7.7	7.8	7.5	7.6
	O2 ppm	9.7	8.7	9.4	8.7	9.3
	Cond.	951				985
	Temp(C)	15.0	15.0	15.0	15.0	15.0
50	pH	7.7	7.9	7.7	7.7	7.6
	O2 ppm	9.8	8.8	9.5	8.4	9.5
	Cond.	1315				1290
	Temp(C)	15.0	15.0	15.0	15.0	15.0
65	pH	7.8	8.0	7.8	7.8	7.7
	O2 ppm	9.8	8.7	9.6	8.2	9.6
	Cond.	1624				1710
	Temp(C)	15.0	15.0	15.0	15.0	15.0
100	pH	7.7	8.0			
	O2 ppm	8.9	8.5			
	Cond.	2360	2490			
	Temp(C)	15.0	15.0			

TOXICITY TEST REPORT

Sample: 06900265

TEST CONDITIONS

Company : GE Plastics Canada Ltd.
Cobourg, ONT
(600007)
Region : Central
Industry : Organic Chemical
Control point : combined effluent, (100)
Laboratory : BEAK
Sampling Method : GRAB
Sampled By : PAUL HERRIOT
Date Collected : 02/13/90
Received : 02/14/90
Tested : 02/14/90 at: 1630
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	10	10	10	10	100
65	0	10	10	10	10	100
50	0	10	10	10	10	100
30	0	3	5	6	7	70
20	0	0	0	0	0	0
10	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : 28.1 %

95% fid. limits : 24.6 - 32.1 %

Comments : 70% MORTALITY IN 30% TEST CONCENTRATION

SLOPE of Mortality Curve :
LC50 Calculated By : SPEARMAN-KARBER

TOXICITY TEST PARAMETERS

Sample Number: 06900265

TEST ELAPSED TIME
CONC. % 00:00 24:00 48:00 72:00 96:00

100	pH	8.0	8.2			
	O2 ppm	8.4	8.4			
	Cond.	2560	2570			
	Temp(C)	15.0	15.0			
65	pH	8.0	8.3			
	O2 ppm	9.6	9.0			
	Cond.	1773	1834			
	Temp(C)	15.0	15.0			
50	pH	7.9	8.3			
	O2 ppm	9.4	9.0			
	Cond.	1444	1448			
	Temp(C)	15.0	15.0			
30	pH	7.9	8.4	8.5	8.5	8.5
	O2 ppm	9.5	9.1	8.9	9.7	8.9
	Cond.	1044				1108
	Temp(C)	15.0	15.0	15.0	15.0	15.0
20	pH	7.8	8.4	8.5	8.2	8.2
	O2 ppm	9.4	9.1	8.8	8.7	8.7
	Cond.	837				892
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.6	8.4	8.3	8.3	8.3
	O2 ppm	9.2	9.2	8.6	8.8	8.8
	Cond.	604				652
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.8	8.0	8.1	8.0	8.0
	O2 ppm	9.4	9.2	9.3	8.7	8.6
	Cond.	388				398
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 06900388

TEST CONDITIONS

Company : GE Plastics Canada Ltd.
 Cobourg, ONT
 (600007)
 Region : Central
 Industry : Organic Chemical

Control point : combined effluent, (100)

Laboratory : BEAK
 Sampling Method : GRAB
 Sampled By : P. HERRIOT
 Date Collected : 03/13/90
 Received : 03/14/90
 Tested : 03/14/90 at: 1500

Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	10	10	10	10	100
65	0	10	10	10	10	100
50	0	10	10	10	10	100
30	0	10	10	10	10	100
20	0	5	6	8	9	90
10	0	0	0	0	1	10
Control	0	0	0	0	0	0

96 Hour LC50 : 14.1 %

95% fid. limits : 10.3 - 17.2 %

Comments : 90% MORTALITY IN 20% TEST CONCENTRATION

SLOPE of Mortality Curve :
 LC50 Calculated By : MOVING AVERAGE

TOXICITY TEST PARAMETERS

Sample Number: 06900388

TEST CONC. %	ELAPSED TIME				
	00:00	24:00	48:00	72:00	96:00

100	pH	8.1	8.4		
	O2 ppm	8.0	8.2		
	Cond.	3070	2920		
	Temp(C)	15.0	15.0		
65	pH	8.0	8.3		
	O2 ppm	8.3	9.2		
	Cond.	2180	2070		
	Temp(C)	15.0	15.0		
50	pH	8.0	8.3		
	O2 ppm	8.7	8.4		
	Cond.	1609	1584		
	Temp(C)	15.0	15.0		
30	pH	7.9	8.2		
	O2 ppm	8.5	8.8		
	Cond.	1104	1124		
	Temp(C)	15.0	15.0		
20	pH	8.0	8.1	8.2	8.4
	O2 ppm	8.9	8.7	9.3	8.5
	Cond.	880			882
	Temp(C)	15.0	15.0	15.0	14.0
10	pH	7.9	8.1	7.9	8.2
	O2 ppm	8.6	8.3	9.2	8.2
	Cond.	596			642
	Temp(C)	15.0	15.0	15.0	14.0
Control	pH	8.0	8.0	7.9	7.9
	O2 ppm	8.9	8.6	9.1	8.1
	Cond.	369			392
	Temp(C)	15.0	15.0	15.0	14.0

TOXICITY TEST REPORT

Sample: 06891147

TEST CONDITIONS

Company : GE Plastics Canada Ltd.
Cobourg, ONT
(600007)
Region : Central
Industry : Organic Chemical
Control point : OT cooling water, (400)
Laboratory : BEAK
Sampling Method : GRAB
Sampled By : PAUL HERRIOT
Date Collected : 11/27/89
Received : 11/28/89
Tested : 11/28/89 at: 1530
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY %
	%	00:00	24:00	48:00	72:00	96:00
Control	0	0	0	0	0	0
10	0	0	0	0	0	0
20	0	0	0	0	0	0
30	0	0	0	0	0	0
50	0	0	0	0	0	0
65	0	0	0	0	0	0
100	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : MOVING AVERAGE

TOXICITY TEST PARAMETERS

Sample Number: 06891147

TEST ELAPSED TIME
CONC. % 00:00 24:00 48:00 72:00 96:00

Control	pH	7.6	7.9	7.9	7.8	7.8
	O2 ppm	8.9	9.1	9.3	9.6	9.0
	Cond.	360				361
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.4	7.7	7.8	7.7	7.7
	O2 ppm	8.9	8.3	8.6	8.9	8.7
	Cond.	377				371
	Temp(C)	15.0	15.0	15.0	15.0	15.0
20	pH	7.4	7.8	7.9	7.8	7.8
	O2 ppm	9.3	9.3	8.9	9.2	8.7
	Cond.	377				379
	Temp(C)	15.0	15.0	15.0	15.0	15.0
30	pH	7.4	7.8	7.9	7.7	7.7
	O2 ppm	8.8	8.7	8.4	8.9	8.9
	Cond.	379				379
	Temp(C)	15.0	15.0	15.0	15.0	15.0
50	pH	7.9	7.8	7.8	7.7	7.7
	O2 ppm	8.8	8.3	8.2	8.8	8.7
	Cond.	386				382
	Temp(C)	15.0	15.0	15.0	15.0	15.0
65	pH	7.4	7.7	8.0	7.7	7.7
	O2 ppm	9.1	8.7	8.8	9.1	8.7
	Cond.	390				381
	Temp(C)	15.0	15.0	15.0	15.0	15.0
100	pH	7.4	7.7	8.0	7.8	7.8
	O2 ppm	9.1	9.1	8.5	8.5	8.8
	Cond.	399				382
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 06900031

TEST CONDITIONS

Company : GE Plastics Canada Ltd.
 Cobourg, ONT
 (600007)
 Region : Central
 Industry : Organic Chemical
 Control point : OT cooling water, (400)
 Laboratory : BEAK
 Sampling Method : GRAB
 Sampled By : PAUL HARRIOTT
 Date Collected : 01/09/90
 Received : 01/10/90
 Tested : 01/10/90 at: 1430
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY	
	%	00:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

SLOPE of Mortality Curve :
 LC50 Calculated By : MOVING AVERAGE

TOXICITY TEST PARAMETERS

Sample Number: 06900031

TEST CONC. %	ELAPSED TIME				
	00:00	24:00	48:00	72:00	96:00

Control	pH	7.4	7.7	7.7	7.7	7.6
	O2 ppm	8.9	8.4	9.2	10.1	9.0
	Cond.	363				362
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.5	7.8	7.6	7.6	7.6
	O2 ppm	9.0	9.0	9.4	9.7	9.4
	Cond.	361				367
	Temp(C)	15.0	15.0	15.0	15.0	15.0
20	pH	7.6	7.8	7.7	7.6	7.6
	O2 ppm	9.2	9.3	9.6	9.8	9.5
	Cond.	360				366
	Temp(C)	15.0	15.0	15.0	15.0	15.0
30	pH	7.7	7.9	7.8	7.6	7.6
	O2 ppm	9.4	9.7	9.5	9.9	9.7
	Cond.	358				362
	Temp(C)	15.0	15.0	15.0	15.0	15.0
50	pH	7.7	7.9	7.7	7.7	7.6
	O2 ppm	9.7	9.7	9.4	9.8	9.9
	Cond.	356				360
	Temp(C)	15.0	15.0	15.0	15.0	15.0
65	pH	7.8	7.9	7.8	7.7	7.8
	O2 ppm	9.7	9.7	9.6	9.9	9.9
	Cond.	354				356
	Temp(C)	15.0	15.0	15.0	15.0	15.0
100	pH	7.8	8.0	7.8	7.7	7.9
	O2 ppm	9.6	9.6	9.5	10.1	9.9
	Cond.	351				345
	Temp(C)	15.0	15.0	15.0	15.0	15.0

COMPANY: GE Plastics Canada Ltd., Cobourg
(600007)
SECTOR: Organic Chemical
REGION: Central

SUMMARY

Data for eight Daphnia magna acute lethality toxicity tests conducted on samples of once through cooling water and combined effluent were submitted by G.E. Plastics Canada Ltd. of Cobourg.

The two samples of once through cooling water were toxic to Daphnia with LC50 values 23.4 and 37%.

The six samples of combined effluent tested by the company were not acutely lethal to Daphnia.

combined effluent

06890989 sampled: 10/10/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

06891085 sampled: 11/14/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

06891273 sampled: 12/12/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

06900030 sampled: 01/09/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: NO MORTALITY OR IMMOBILITY OBSERVED IN 48 HRS

06900266 sampled: 02/13/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: NO MORTALITY OR IMMOBILITY OBSERVED IN 48 HRS

06900389 sampled: 03/13/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: UNSEASONABLE WARM TEMP RESULTED IN ELEVATION

storm water

storm water

GE Plastics Canada Ltd. (continued)

OT cooling water

06891148 sampled: 11/27/89 LC50: 23.4 %
95% fid. limits: 17.0 - 29.5 % slope: 4.5
comments:

06900032 sampled: 01/09/90 LC50: 37.0 %
95% fid. limits: 40.4 - 33.9 %
comments: 100% MORTALITY IN 50% CONCENTRATION.

intake water

TOXICITY TEST REPORT

Sample: 06890989

TEST CONDITIONS

Company : GE Plastics Canada Ltd.
Cobourg, ONT
(600007)
Region : Central
Industry : Organic Chemical
Control point : combined effluent, (100)
Laboratory : BEAK
Sampling Method : GRAB
Sampled By : ROB EAKINS
Date Collected : 10/10/89
Received : 10/10/89
Tested : 10/10/89 at: 1740
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:40	24:00	48:00	%
100	0	0	0	0
65	0	0	0	0
50	0	0	0	0
30	0	0	0	0
20	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 06890989

TEST CONC. %	ELAPSED TIME		
	00:40	24:00	48:00

100	pH	6.9	7.1
	O2 ppm	7.5	7.7
	Cond.	2280	2301
	Temp(C)	20.0	20.0
65	pH	7.3	7.6
	O2 ppm	7.8	8.2
	Cond.	1672	1663
	Temp(C)	20.0	20.0
50	pH	7.5	7.7
	O2 ppm	8.0	8.1
	Cond.	1416	1424
	Temp(C)	20.0	20.0
30	pH	7.9	7.9
	O2 ppm	8.4	8.3
	Cond.	998	1008
	Temp(C)	20.0	20.0
20	pH	8.0	8.0
	O2 ppm	8.6	8.4
	Cond.	828	838
	Temp(C)	20.0	20.0
10	pH	8.1	8.1
	O2 ppm	8.7	8.6
	Cond.	598	598
	Temp(C)	20.0	20.0
Control	pH	8.2	8.1
	O2 ppm	8.7	8.5
	Cond.	356	374
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 06891085

TEST CONDITIONS

Company : GE Plastics Canada Ltd.
Cobourg, ONT
(600007)
Region : Central
Industry : Organic Chemical
Control point : combined effluent, (100)
Laboratory : BEAK
Sampling Method : GRAB
Sampled By : PAUL HERRIOT
Date Collected : 11/14/89
Received : 11/15/89
Tested : 11/15/89 at: 1425
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
Control	0	0	0	0
10	0	0	0	0
20	0	0	0	0
30	0	0	0	0
50	0	0	0	0
65	0	0	0	0
100	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

TOXICITY TEST PARAMETERS

Sample Number: 06891085

TEST CONC. %	ELAPSED TIME		
	00:00	24:00	48:00

Control	pH	8.2	8.2
	O2 ppm	8.4	8.7
	Cond.	365	360
	Temp(C)	20.0	20.0
10	pH	8.1	8.1
	O2 ppm	8.5	8.4
	Cond.	577	557
	Temp(C)	20.0	20.0
20	pH	7.9	8.0
	O2 ppm	8.5	7.8
	Cond.	808	740
	Temp(C)	20.0	20.0
30	pH	7.8	8.0
	O2 ppm	8.7	7.5
	Cond.	1057	971
	Temp(C)	20.0	20.0
50	pH	7.7	7.9
	O2 ppm	8.6	6.6
	Cond.	1414	1265
	Temp(C)	20.0	20.0
65	pH	7.6	7.8
	O2 ppm	8.9	5.7
	Cond.	1703	1619
	Temp(C)	20.0	20.0
100	pH	7.5	7.6
	O2 ppm	8.7	3.4
	Cond.	2160	2070
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 06891273

TEST CONDITIONS

Company : GE Plastics Canada Ltd.
Cobourg, ONT
(600007)
Region : Central
Industry : Organic Chemical

Control point : combined effluent, (100)

Laboratory : BEAK
Sampling Method : GRAB
Sampled By : PAUL HERRIOT
Date Collected : 12/12/89
Received : 12/13/89
Tested : 12/13/89 at: 1730

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. ONE, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00 48:00	
Control	0	0	0	0
10	0	0	0	0
20	0	0	0	0
30	0	0	0	0
50	0	0	0	0
65	0	0	0	0
100	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : MOVING AVERAGE

TOXICITY TEST PARAMETERS

Sample Number: 06891273

TEST ELAPSED TIME
CONC. % 00:00 24:00 48:00

Control	pH	8.1	8.1
	O2 ppm	8.9	8.6
	Cond.	377	385
	Temp(C)	20.0	20.0 20.0
10	pH	8.0	8.1
	O2 ppm	9.0	8.6
	Cond.	612	596
	Temp(C)	20.0	20.0 20.0
20	pH	7.9	8.2
	O2 ppm	8.8	8.5
	Cond.	889	887
	Temp(C)	20.0	20.0 20.0
30	pH	7.9	8.2
	O2 ppm	8.7	8.3
	Cond.	1077	1029
	Temp(C)	20.0	20.0 20.0
50	pH	7.8	8.3
	O2 ppm	8.7	7.9
	Cond.	1492	1509
	Temp(C)	20.0	20.0 20.0
65	pH	7.8	8.2
	O2 ppm	8.5	7.9
	Cond.	1787	1769
	Temp(C)	20.0	20.0 20.0
100	pH	7.7	8.1
	O2 ppm	8.7	7.7
	Cond.	2560	2460
	Temp(C)	20.0	20.0 20.0

TOXICITY TEST REPORT

Sample: 06900030

TEST CONDITIONS

Company : GE Plastics Canada Ltd.
Cobourg, ONT
(600007)
Region : Central
Industry : Organic Chemical
Control point : combined effluent, (100)
Laboratory : BEAK
Sampling Method : GRAB
Sampled By : PAUL HARRIOTT
Date Collected : 01/09/90
Received : 01/10/90
Tested : 01/10/90 at: 1515
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
Control	0	0	0	0
10	0	0	0	0
20	0	0	0	0
30	0	0	0	0
50	0	0	0	0
65	0	0	0	0
100	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : NO MORTALITY OR IMMOBILITY OBSERVED IN 48 HRS

TOXICITY TEST PARAMETERS

Sample Number: 06900030

TEST CONC. %	ELAPSED TIME		
	00:00	24:00	48:00

Control	pH	8.1	8.2
	O2 ppm	8.8	8.4
	Cond.	379	377
	Temp(C)	20.0	21.0
10	pH	8.0	8.3
	O2 ppm	8.8	8.5
	Cond.	621	617
	Temp(C)	20.0	21.0
20	pH	8.0	8.2
	O2 ppm	8.8	8.2
	Cond.	854	856
	Temp(C)	20.0	21.0
30	pH	7.9	8.2
	O2 ppm	8.7	8.0
	Cond.	1063	1058
	Temp(C)	20.0	21.0
50	pH	7.8	8.2
	O2 ppm	8.5	7.6
	Cond.	1465	1441
	Temp(C)	20.0	21.0
65	pH	7.8	8.2
	O2 ppm	8.4	7.5
	Cond.	1762	1733
	Temp(C)	20.0	21.0
100	pH	7.8	8.1
	O2 ppm	8.4	6.6
	Cond.	2460	2480
	Temp(C)	20.0	21.0

TOXICITY TEST REPORT

Sample: 06900266

TEST CONDITIONS

Company : GE Plastics Canada Ltd.
Cobourg, ONT
(600007)
Region : Central
Industry : Organic Chemical
Control point : combined effluent, (100)
Laboratory : BEAK
Sampling Method : GRAB
Sampled By : PAUL HERRIOT
Date Collected : 02/13/90
Received : 02/14/90
Tested : 02/14/90 at: 1700
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00	48:00
100	0	0	0	0
65	0	0	0	0
50	0	0	0	0
30	0	0	0	0
20	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : NO MORTALITY OR IMMOBILITY OBSERVED IN 48 HRS

SLOPE of Mortality Curve :
LC50 Calculated By : MOVING AVERAGE

TOXICITY TEST PARAMETERS

Sample Number: 06900266

TEST CONC. %	ELAPSED TIME		
	00:00	24:00	48:00

100	pH	7.9	7.9
	O2 ppm	8.3	3.0
	Cond.	2610	2490
	Temp(C)	21.0	21.0
65	pH	7.9	7.9
	O2 ppm	7.9	4.8
	Cond.	1820	1746
	Temp(C)	21.0	21.0
50	pH	7.9	8.1
	O2 ppm	7.9	6.5
	Cond.	1512	1477
	Temp(C)	21.0	21.0
30	pH	8.0	8.2
	O2 ppm	8.4	7.2
	Cond.	1087	1072
	Temp(C)	21.0	21.0
20	pH	8.0	8.2
	O2 ppm	8.0	6.9
	Cond.	870	858
	Temp(C)	21.0	21.0
10	pH	8.1	8.2
	O2 ppm	8.2	7.7
	Cond.	597	602
	Temp(C)	21.0	21.0
Control	pH	8.2	7.9
	O2 ppm	8.4	7.4
	Cond.	396	397
	Temp(C)	21.0	21.0

TOXICITY TEST REPORT

Sample: 06900389

TEST CONDITIONS

Company : GE Plastics Canada Ltd.
Cobourg, ONT
(600007)
Region : Central
Industry : Organic Chemical

Control point : combined effluent, (100)

Laboratory : BEAK
Sampling Method : GRAB
Sampled By : P. HERRIOT
Date Collected : 03/13/90
Received : 03/14/90
Tested : 03/14/90 at: 1420

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY	
	%	00:00	24:00	48:00	%
100	0	0	0	0	0
65	0	0	0	0	0
50	0	0	0	0	0
30	0	0	0	0	0
20	0	0	0	0	0
10	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : UNSEASONABLE WARM TEMP RESULTED IN ELEVATION

SLOPE of Mortality Curve :
LC50 Calculated By : MOVING AVERAGE

TOXICITY TEST PARAMETERS

Sample Number: 06900389

TEST CONC.	ELAPSED TIME		
	%	00:00	24:00

100	pH	7.9	8.1	
	O2 ppm	7.1	5.4	
	Cond.	3070	2830	
	Temp(C)	21.0	22.0	22.0
65	pH	7.9	8.2	
	O2 ppm	7.1	5.5	
	Cond.	2190	1971	
	Temp(C)	21.0	22.0	22.0
50	pH	7.9	8.1	
	O2 ppm	7.5	5.8	
	Cond.	1833	1663	
	Temp(C)	21.0	22.0	22.0
30	pH	7.9	8.2	
	O2 ppm	7.3	6.5	
	Cond.	1773	1612	
	Temp(C)	21.0	22.0	22.0
20	pH	8.0	8.2	
	O2 ppm	7.8	7.2	
	Cond.	994	903	
	Temp(C)	21.0	22.0	22.0
10	pH	8.0	8.1	
	O2 ppm	7.5	7.4	
	Cond.	688	648	
	Temp(C)	21.0	22.0	22.0
Control	pH	8.1	8.0	
	O2 ppm	8.2	7.4	
	Cond.	426	433	
	Temp(C)	21.0	22.0	22.0

TOXICITY TEST REPORT

Sample: 06891148

TEST CONDITIONS

Company : GE Plastics Canada Ltd.
 Cobourg, ONT
 (600007)
 Region : Central
 Industry : Organic Chemical
 Control point : OT cooling water, (400)
 Laboratory : BEAK
 Sampling Method : GRAB
 Sampled By : PAUL HERRIOT
 Date Collected : 11/27/89
 Received : 11/28/89
 Tested : 11/28/89 at: 1730
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00 48:00	
Control	0	0	0	0
10	0	0	1	10
20	0	0	2	20
30	0	6	8	80
50	0	7	9	90
65	0	7	10	100
100	0	10	10	100

48 Hour LC50 : 23.4 %

95% fid. limits : 17.0 - 29.5 %

Comments :

SLOPE of Mortality Curve : 4.5
 LC50 Calculated By : PROBIT

TOXICITY TEST PARAMETERS

Sample Number: 06891148

TEST ELAPSED TIME
 CONC. % 00:00 24:00 48:00

Control	pH	7.8	7.8	
	O2 ppm	8.7	7.9	
	Cond.	360	394	
	Temp(C)	20.0	20.0	20.0
10	pH	7.8	8.0	
	O2 ppm	8.7	8.4	
	Cond.	367	396	
	Temp(C)	20.0	20.0	20.0
20	pH	7.8	8.0	
	O2 ppm	8.6	7.8	
	Cond.	368	400	
	Temp(C)	20.0	20.0	20.0
30	pH	7.7	8.0	
	O2 ppm	9.1	7.7	
	Cond.	368	402	
	Temp(C)	20.0	20.0	20.0
50	pH	7.6	7.9	
	O2 ppm	8.8	7.3	
	Cond.	368	404	
	Temp(C)	20.0	20.0	20.0
65	pH	7.5	7.8	
	O2 ppm	8.8	6.9	
	Cond.	368	406	
	Temp(C)	20.0	20.0	20.0
100	pH	7.4	7.8	
	O2 ppm	8.3	6.4	
	Cond.	371	412	
	Temp(C)	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 06900032

TEST CONDITIONS

Company : GE Plastics Canada Ltd.
 Cobourg, ONT
 (600007)
 Region : Central
 Industry : Organic Chemical
 Control point : OT cooling water, (400)
 Laboratory : BEAK
 Sampling Method : GRAB
 Sampled By : PAUL HARTOTT
 Date Collected : 01/09/90
 Received : 01/10/90
 Tested : 01/10/90 at: 1510
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00 48:00	
Control	0	0	0	0
10	0	0	0	0
20	0	0	0	0
30	0	0	1	10
50	0	8	10	100
65	0	10	10	100
100	0	10	10	100

48 Hour LC50 : 37.0 %

95% fid. limits : 40.4 - 33.9 %

Comments : 100% MORTALITY IN 50% CONCENTRATION.

SLOPE of Mortality Curve :
 LC50 Calculated By : SPEARMAN-KARBER

TOXICITY TEST PARAMETERS

Sample Number: 06900032

TEST ELAPSED TIME
 CONC. % 00:00 24:00 48:00

Control	pH	8.1	8.2
	O2 ppm	8.8	8.4
	Cond.	379	377
	Temp(C)	20.0	21.0
10	pH	8.2	8.2
	O2 ppm	9.2	8.4
	Cond.	385	382
	Temp(C)	20.0	21.0
20	pH	8.2	8.2
	O2 ppm	9.1	8.5
	Cond.	378	381
	Temp(C)	20.0	21.0
30	pH	8.2	8.2
	O2 ppm	9.2	8.4
	Cond.	374	380
	Temp(C)	20.0	21.0
50	pH	8.1	8.1
	O2 ppm	9.4	8.3
	Cond.	368	377
	Temp(C)	20.0	21.0
65	pH	8.1	8.1
	O2 ppm	9.4	8.4
	Cond.	363	373
	Temp(C)	20.0	21.0
100	pH	8.0	8.1
	O2 ppm	9.5	8.0
	Cond.	356	368
	Temp(C)	20.0	21.0

COMPANY: Guardsman Products Ltd., Cornwall
(122470008)
SECTOR: Organic Chemical
REGION: Southeast

SUMMARY

The initiation of acute toxicity monitoring by Guardsman Products Ltd. began on February 1, 1990, therefore no data has been submitted for the period between October 1989 and March 1990.

OTCW

OTCW

COMPANY: Guardsman Products Ltd., Cornwall
(122470008)
SECTOR: Organic Chemical
REGION: Southeast

SUMMARY

Guardsman Products Ltd. of Cornwall commenced the monitoring regulations on February 1, 1990, therefore there is no data for review at this time.

OTCW

OTCW

COMPANY: Morbern Inc., Cornwall
(12580007)
SECTOR: Organic Chemical
REGION: Southeast

SUMMARY

The data for two trout bioassays, conducted on once through cooling water samples collected between October 1989 and March 1990, were provided by Morbern Incorporated. Both samples of cooling water were determined to have been non-acutely lethal to test fish. Morbern commenced monitoring on February 1, 1990.

OTCW

06900349 sampled: 03/06/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

OTCW

06900351 sampled: 03/06/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

TOXICITY TEST REPORT

Sample: 06900349

TEST CONDITIONS

Company : Morbern Inc.
 Cornwall, ONT
 (12580007)
 Region : Southeast
 Industry : Organic Chemical
 Control point : OTCW, (100)
 Laboratory : BEAK
 Sampling Method : GRAB
 Sampled By : D. JULIEN
 Date Collected : 03/06/90
 Received : 03/07/90
 Tested : 03/07/90 at: 1330
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY	
	%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

SLOPE of Mortality Curve :
 LC50 Calculated By : MOVING AVERAGE

TOXICITY TEST PARAMETERS

Sample Number: 06900349

TEST ELAPSED TIME
 CONC. % 00:00 24:00 48:00 72:00 96:00

100	pH	7.9	8.2	8.1	8.2	8.1
	O2 ppm	9.9	9.8	9.1	10.6	9.5
	Cond.	346				343
	Temp(C)	15.0	15.0	15.0	15.0	15.0
65	pH	7.9	8.2	8.0	8.1	8.0
	O2 ppm	10.0	10.1	9.2	10.4	9.8
	Cond.	367				369
	Temp(C)	15.0	15.0	15.0	15.0	15.0
50	pH	7.9	8.2	8.1	8.2	8.1
	O2 ppm	9.8	9.8	9.3	10.6	9.6
	Cond.	377				382
	Temp(C)	15.0	15.0	15.0	15.0	15.0
30	pH	7.8	8.1	8.1	8.1	8.0
	O2 ppm	9.7	9.7	9.1	10.6	9.5
	Cond.	389				395
	Temp(C)	15.0	15.0	15.0	15.0	15.0
20	pH	7.8	8.1	8.1	8.2	8.1
	O2 ppm	9.6	9.8	8.8	10.4	9.8
	Cond.	396				403
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.7	8.0	8.0	8.1	8.0
	O2 ppm	9.5	9.6	8.0	10.2	9.7
	Cond.	394				414
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	8.0	8.1	8.1	7.9	7.8
	O2 ppm	9.0	9.1	9.2	10.4	9.6
	Cond.	413				398
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 06900351

TEST CONDITIONS

Company : Morbern Inc.
 Cornwall, ONT
 (12580007)
 Region : Southeast
 Industry : Organic Chemical
 Control point : OTCW, (200)
 Laboratory : BEAK
 Sampling Method : GRAB
 Sampled By : D. JULIEN
 Date Collected : 03/06/90
 Received : 03/07/90
 Tested : 03/07/90 at: 1330
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
50	0	0	0	0	0	0
30	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : NO MORTALITY OR SUBLETHAL IMPAIRMENT OBSERVED

 SLOPE of Mortality Curve :
 LC50 Calculated By : MOVING AVERAGE

TOXICITY TEST PARAMETERS

Sample Number: 06900351

TEST CONC.	ELAPSED TIME				
%	00:00	24:00	48:00	72:00	96:00

100	pH	8.0	8.2	8.1	8.2	8.1
	O2 ppm	9.9	9.7	9.2	10.6	9.7
	Cond.	343				341
	Temp(C)	15.0	15.0	15.0	15.0	15.0
65	pH	7.9	8.2	8.1	8.2	8.1
	O2 ppm	9.8	9.8	8.7	10.2	9.8
	Cond.	366				367
	Temp(C)	15.0	15.0	15.0	15.0	15.0
50	pH	7.9	8.1	8.1	8.1	7.9
	O2 ppm	9.7	9.7	8.8	10.2	9.3
	Cond.	376				380
	Temp(C)	15.0	15.0	15.0	15.0	15.0
30	pH	7.9	8.0	8.0	8.0	7.8
	O2 ppm	9.6	9.8	8.7	10.2	9.3
	Cond.	389				398
	Temp(C)	15.0	15.0	15.0	15.0	15.0
20	pH	7.8	8.0	7.9	8.1	8.0
	O2 ppm	9.6	9.6	9.0	10.4	9.4
	Cond.	396				404
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.8	8.0	7.9	8.0	7.9
	O2 ppm	9.4	9.6	8.4	10.6	9.4
	Cond.	399				411
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	8.0	8.1	8.1	7.9	7.8
	O2 ppm	9.0	9.1	8.9	10.4	9.6
	Cond.	413				398
	Temp(C)	15.0	15.0	15.0	15.0	15.0

COMPANY: Morbern Inc., Cornwall
(12580007)
SECTOR: Organic Chemical
REGION: Southeast

SUMMARY

Morbern Inc. of Cornwall commenced the monitoring regulations on February 1 1990, and therefore have only submitted data for two Daphnia magna acute lethality toxicity tests. Both samples from once through cooling water outfalls #100 and 200 were not acutely lethal to Daphnia.

OTCW

06900352 sampled: 03/06/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: UNSEASONABLE WARM TEMPERATURES TEMP ELEVATED

OTCW

06900350 sampled: 03/06/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: UNSEASONABLE WARM TEMP RESULTED IN ELEVATION

TOXICITY TEST REPORT

Sample: 06900352

TEST CONDITIONS

Company : Morbern Inc.
 Cornwall, ONT
 (12580007)
 Region : Southeast
 Industry : Organic Chemical
 Control point : OTCW, (100)
 Laboratory : BEAK
 Sampling Method : GRAB
 Sampled By : D. JULIEN
 Date Collected : 03/06/90
 Received : 03/07/90
 Tested : 03/07/90 at: 1330
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00	48:00
100	0	0	0	0
65	0	0	0	0
50	0	0	0	0
30	0	0	0	0
20	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : UNSEASONABLE WARM TEMPERATURES TEMP ELEVATED

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 06900352

TEST CONC. %	ELAPSED TIME		
	00:00	24:00	48:00

100	pH	8.0	8.2
	O2 ppm	9.9	8.2
	Cond.	339	350
	Temp(C)	21.0	22.0
65	pH	8.1	8.2
	O2 ppm	8.5	7.9
	Cond.	367	378
	Temp(C)	21.0	22.0
50	pH	8.1	8.2
	O2 ppm	8.6	7.6
	Cond.	379	390
	Temp(C)	21.0	22.0
30	pH	8.2	8.2
	O2 ppm	8.2	7.6
	Cond.	395	405
	Temp(C)	21.0	22.0
20	pH	8.2	8.2
	O2 ppm	8.8	7.5
	Cond.	402	412
	Temp(C)	21.0	22.0
10	pH	8.2	8.2
	O2 ppm	8.6	7.5
	Cond.	411	420
	Temp(C)	21.0	22.0
Control	pH	8.3	8.2
	O2 ppm	8.1	7.0
	Cond.	412	418
	Temp(C)	21.0	22.0

TOXICITY TEST REPORT

Sample: 06900350

TEST CONDITIONS

Company : Morbern Inc.
Cornwall, ONT
(12580007)
Region : Southeast
Industry : Organic Chemical
Control point : OTCW, (200)
Laboratory : BEAK
Sampling Method : GRAB
Sampled By : D. JULIEN
Date Collected : 03/06/90
Received : 03/07/90
Tested : 03/07/90 at: 1400
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00	48:00
100	0	0	0	0
65	0	0	0	0
50	0	0	0	0
30	0	0	0	0
20	0	0	0	0
10	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : UNSEASONABLE WARM TEMP RESULTED IN ELEVATION

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 06900350

TEST CONC.	ELAPSED TIME		
%	00:00	24:00	48:00

100	pH	8.0	8.1
	O2 ppm	9.7	8.2
	Cond.	336	351
	Temp(C)	21.0	22.0
65	pH	8.1	8.2
	O2 ppm	9.5	7.8
	Cond.	363	376
	Temp(C)	21.0	22.0
50	pH	8.1	8.2
	O2 ppm	9.1	7.9
	Cond.	376	389
	Temp(C)	21.0	22.0
30	pH	8.2	8.2
	O2 ppm	8.6	8.3
	Cond.	392	404
	Temp(C)	21.0	22.0
20	pH	8.2	8.2
	O2 ppm	8.1	8.2
	Cond.	400	412
	Temp(C)	21.0	22.0
10	pH	8.3	8.2
	O2 ppm	8.6	7.8
	Cond.	407	416
	Temp(C)	21.0	22.0
Control	pH	8.3	8.2
	O2 ppm	8.1	7.0
	Cond.	412	418
	Temp(C)	21.0	22.0

COMPANY: Novacor Chemicals Ltd., Mooretown
(380105)
SECTOR: Organic Chemical
REGION: Southwest

SUMMARY

The data for five trout bioassays, conducted on combined effluent discharge samples collected between October 1989 and March 1990, were provided by Novacor Chemicals Limited. All five combined effluent samples were determined to have been non-acutely lethal to test fish.

combined effluent

05890090 sampled: 10/30/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05890109 sampled: 11/15/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900002 sampled: 01/03/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900021 sampled: 01/24/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900046 sampled: 02/21/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900064 sampled: 03/21/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

storm water

emergency overflow

storm water

TOXICITY TEST REPORT

Sample: 05890090

TEST CONDITIONS

Company : Novacor Chemicals Ltd.
Mooretown, ONT
(380105)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (100)
Laboratory : Pollutech
Sampling Method : grab
Sampled By : C. Ferguson
Date Collected : 10/30/89
Received : 10/30/89
Tested : 10/31/89 at: 1400
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY %
	%	00:00	19:00	44:30	68:00	96:30
100	0	0	0	0	0	0
75	0	0	0	0	0	0
56	0	0	0	0	0	0
25	0	0	0	0	0	0
10	0	0	0	0	0	0
1	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 05890090

TEST CONC. %	E L A P S E D T I M E				
	00:00	19:00	44:30	68:00	96:30

100	pH	8.3	7.5	7.5	7.4	7.4
	O2 ppm	9.2	7.1	6.4	6.1	6.1
	Cond.	373				370
	Temp(C)	15.0	15.0	15.0	15.0	15.0
75	pH	7.7	7.5	7.5	7.4	7.4
	O2 ppm	9.0	7.2	7.4	7.0	7.2
	Cond.	322				320
	Temp(C)	15.0	15.0	15.0	15.0	15.0
56	pH	7.4	7.4	7.4	7.4	7.4
	O2 ppm	8.9	7.3	7.4	7.2	7.2
	Cond.	290				290
	Temp(C)	15.0	15.0	15.0	15.0	15.0
25	pH	7.2	7.4	7.4	7.4	7.4
	O2 ppm	8.8	7.2	7.0	6.6	6.8
	Cond.	220				228
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.1	7.4	7.4	7.4	7.5
	O2 ppm	8.8	7.9	7.8	7.6	7.6
	Cond.	194				200
	Temp(C)	15.0	15.0	15.0	15.0	15.0
1	pH	7.1	7.4	7.4	7.4	7.5
	O2 ppm	8.7	7.9	6.6	6.6	7.2
	Cond.	170				180
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.0	7.3	7.5	7.5	7.5
	O2 ppm	8.5	7.4	8.7	8.7	8.4
	Cond.	170				180
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.0	7.2	7.4	7.4	7.5
	O2 ppm	8.6	8.4	7.9	7.9	8.4
	Cond.	170				181
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 05890109

TEST CONDITIONS

Company : Novacor Chemicals Ltd.
 Mooretown, ONT
 (380105)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : Pollutech
 Sampling Method : grab
 Sampled By : C. Ferguson
 Date Collected : 11/15/89
 Received : 11/15/89
 Tested : 11/16/89 at: 1230
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	22:10	49:00	73:10	96:00	%
100	0	0	0	0	0	0
75	0	0	0	0	0	0
56	0	0	0	0	0	0
25	0	0	0	0	0	0
10	0	0	0	0	0	0
1	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal
 95% fid. limits : 0.0 - 0.0 %
 Comments :

SLOPE of Mortality Curve :
 LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 05890109

TEST CONC. %	ELAPSED TIME				
	00:00	22:10	49:00	73:10	96:00

100	pH	7.9	7.8	7.8	7.7	7.7
	O2 ppm	9.3	9.8	9.6	9.9	10.0
	Cond.	484				476
	Temp(C)	15.0	15.0	15.0	15.0	15.0
75	pH	7.6	7.7	7.9	7.7	7.7
	O2 ppm	9.4	9.9	9.9	10.2	9.6
	Cond.	405				399
	Temp(C)	15.0	15.0	15.0	15.0	15.0
56	pH	7.4	7.7	7.8	7.7	7.7
	O2 ppm	9.4	9.9	9.9	10.2	9.7
	Cond.	350				350
	Temp(C)	15.0	15.0	15.0	15.0	15.0
25	pH	7.3	7.7	7.8	7.7	7.7
	O2 ppm	9.6	10.0	10.0	10.1	9.7
	Cond.	250				252
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.3	7.7	7.9	7.8	7.7
	O2 ppm	9.7	10.1	10.0	10.3	9.9
	Cond.	202				205
	Temp(C)	15.0	15.0	15.0	15.0	15.0
1	pH	7.3	7.8	7.9	7.9	7.7
	O2 ppm	9.8	10.3	10.2	10.2	10.0
	Cond.	165				170
	Temp(C)	15.0	15.0	15.5	15.0	15.0
Control	pH	7.2	7.6	7.7	7.7	7.8
	O2 ppm	9.9	10.0	9.5	9.5	9.9
	Cond.	165				165
	Temp(C)	15.0	15.0	15.5	15.0	15.0
Control	pH	7.2	7.8	7.8	7.8	7.9
	O2 ppm	9.8	10.2	9.8	10.2	10.2
	Cond.	165				162
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 05900002

TEST CONDITIONS

Company : Novacor Chemicals Ltd.
Mooretown, ONT
(380105)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (100)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : P. Tymstra
Date Collected : 01/03/90
Received : 01/03/90
Tested : 01/04/90 at: 1200
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
	%	00:00	21:00	46:30	69:00 97:00	
100	0	0	0	0	0	0
75	0	0	0	0	0	0
56	0	0	0	0	0	0
25	0	0	0	0	0	0
10	0	0	0	0	0	0
1	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900002

TEST CONC.	ELAPSED TIME				
%	00:00	21:00	46:30	69:00	97:00

100	pH	7.3	7.6
	O2 ppm	8.3	8.4
	Cond.	620	650
	Temp(C)	15.0	15.0
75	pH	7.4	7.5
	O2 ppm	8.6	8.2
	Cond.	510	520
	Temp(C)	15.0	15.0
56	pH	7.4	7.6
	O2 ppm	9.5	8.2
	Cond.	426	435
	Temp(C)	15.0	15.0
25	pH	7.5	7.6
	O2 ppm	9.9	8.4
	Cond.	285	300
	Temp(C)	15.0	15.0
10	pH	7.6	7.6
	O2 ppm	10.2	8.5
	Cond.	222	238
	Temp(C)	15.0	15.0
1	pH	7.6	7.6
	O2 ppm	10.3	8.5
	Cond.	175	185
	Temp(C)	15.0	15.0
Control	pH	7.6	7.6
	O2 ppm	10.3	8.9
	Cond.	166	180
	Temp(C)	15.0	15.0
Control	pH	7.6	7.6
	O2 ppm	10.3	8.2
	Cond.	170	180
	Temp(C)	15.0	15.0

TOXICITY TEST REPORT

Sample: 05900021

TEST CONDITIONS

Company : Novacor Chemicals Ltd.
 Mooretown, ONT
 (380105)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : Pollutech
 Sampling Method : Grab
 Sampled By : P. Tymstra
 Date Collected : 01/24/90
 Received : 01/24/90
 Tested : 01/25/90 at: 1130
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	25:10	47:25	78:00	97:10	%
100	0	0	0	0	0	0
75	0	0	0	0	0	0
56	0	0	0	0	0	0
25	0	0	0	0	0	0
10	0	0	0	0	0	0
1	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900021

TEST CONC. %	ELAPSED TIME
	00:00 25:10 47:25 78:00 97:10

100	pH	7.4	7.5
	O2 ppm	8.6	8.2
	Cond.	680	720
	Temp(C)	15.0	15.0
75	pH	7.4	7.5
	O2 ppm	8.8	8.7
	Cond.	550	600
	Temp(C)	15.0	15.0
56	pH	7.4	7.4
	O2 ppm	9.2	8.6
	Cond.	442	455
	Temp(C)	15.0	15.0
25	pH	7.4	7.4
	O2 ppm	9.4	8.7
	Cond.	299	302
	Temp(C)	15.0	15.0
10	pH	7.5	7.3
	O2 ppm	9.8	8.8
	Cond.	230	234
	Temp(C)	15.0	15.0
1	pH	7.6	7.3
	O2 ppm	9.8	8.6
	Cond.	182	191
	Temp(C)	15.0	15.0
Control	pH	7.5	7.3
	O2 ppm	9.8	8.4
	Cond.	178	179
	Temp(C)	15.0	15.0
Control	pH	7.6	7.3
	O2 ppm	9.8	8.5
	Cond.	179	179
	Temp(C)	15.0	15.0

TOXICITY TEST REPORT

Sample: 05900046

TEST CONDITIONS

Company : Novacor Chemicals Ltd.
 Mooretown, ONT
 (380105)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : Pollutech
 Sampling Method : Grab
 Sampled By : C. Ferguson
 Date Collected : 02/21/90
 Received : 02/21/90
 Tested : 01/22/90 at: 1130
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
	%	00:00	28:10	47:10	73:10	
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900046

TEST CONC.	%	ELAPSED TIME				
		00:00	28:10	47:10	73:10	96:00
100	pH		7.8			7.8
	O2 ppm		9.8			9.3
	Cond.		520			580
	Temp(C)		15.0			15.0
100	pH		7.8			7.8
	O2 ppm		9.9			9.4
	Cond.		510			580
	Temp(C)		15.0			15.0
Control	pH		7.5			7.7
	O2 ppm		10.4			9.1
	Cond.		162			180
	Temp(C)		15.0			15.0
Control	pH		7.5			7.8
	O2 ppm		10.6			9.1
	Cond.		162			180
	Temp(C)		15.0			15.0

MISA Trout

TOXICITY TEST REPORT

Sample: 05900064

TEST CONDITIONS

Company : Novacor Chemicals Ltd.
 Mooretown, ONT
 (380105)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : Pollutech
 Sampling Method : Grab
 Sampled By : C. Ferguson
 Date Collected : 03/21/90
 Received : 03/21/90
 Tested : 03/21/90 at: 1430
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
	%	00:00	22:25	42:15	74:00	96:00
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal
 95% fid. limits : 0.0 - 0.0 %
 Comments :

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900064

TEST CONC. %	E L A P S E D T I M E
	00:00 22:25 42:15 74:00 96:00

100	pH	8.4	7.7
	O2 ppm	12.4	9.6
	Cond.	580	580
	Temp(C)	15.0	15.0
100	pH	8.4	7.7
	O2 ppm	12.4	9.4
	Cond.	580	590
	Temp(C)	15.0	15.0
Control	pH	7.4	7.7
	O2 ppm	11.5	10.0
	Cond.	155	178
	Temp(C)	15.0	15.0
Control	pH	7.4	7.8
	O2 ppm	11.6	10.0
	Cond.	155	178
	Temp(C)	15.0	15.0

COMPANY: Novacor Chemicals Ltd., Mooretown
(380105)
SECTOR: Organic Chemical
REGION: Southwest

SUMMARY

Data for six Daphnia magna acute lethality toxicity tests conducted on samples of combined effluent collected between October 1989 and March 1990 were submitted by Novacor Chemicals Ltd. of Mooretown. Due to scheduling conflicts the December sample was collected on January 3, 1990. All six samples were not acutely lethal to Daphnia.

combined effluent

05890090 sampled: 10/30/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05890109 sampled: 11/15/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900002 sampled: 01/03/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900021 sampled: 01/24/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900046 sampled: 02/21/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900064 sampled: 03/21/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

storm water

emergency overflow

storm water

Novacor Chemicals Ltd. (continued)

TOXICITY TEST REPORT

Sample: 05890090

TEST CONDITIONS

Company : Novacor Chemicals Ltd.
 Mooretown, ONT
 (380105)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : Pollutech
 Sampling Method : Grab
 Sampled By : C. Ferguson
 Date Collected : 10/30/89
 Received : 10/30/89
 Tested : 10/30/89 at: 1600
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00 48:30		%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890090

TEST CONC. %	ELAPSED TIME	
	00:00 48:30	

100	pH	8.6	8.0
	O2 ppm	9.6	8.0
	Cond.	423	460
	Temp(C)	20.0	20.0
50	pH	8.4	8.1
	O2 ppm	9.2	8.1
	Cond.	470	460
	Temp(C)	20.0	20.0
26	pH	8.3	8.2
	O2 ppm	8.8	8.5
	Cond.	485	482
	Temp(C)	20.0	20.0
13	pH	8.2	8.2
	O2 ppm	8.8	8.7
	Cond.	495	485
	Temp(C)	20.0	20.0
6	pH	8.2	8.2
	O2 ppm	8.8	8.8
	Cond.	485	485
	Temp(C)	20.0	20.0
Control	pH	8.0	8.1
	O2 ppm	8.8	9.0
	Cond.	490	490
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05890109

TEST CONDITIONS

Company : Novacor Chemicals Ltd.
 Mooretown, ONT
 (380105)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : Pollutech
 Sampling Method : grab
 Sampled By : C. Ferguson
 Date Collected : 11/15/89
 Received : 11/15/89
 Tested : 11/15/89 at: 1245
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00	49:00	%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
 LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 05890109

TEST CONC. %	ELAPSED TIME	
	00:00	49:00

100	pH	7.9	7.8
	O2 ppm	8.6	9.2
	Cond.	520	520
	Temp(C)	20.0	20.0
50	pH	8.0	8.0
	O2 ppm	9.0	9.4
	Cond.	510	500
	Temp(C)	20.0	20.0
26	pH	8.1	8.1
	O2 ppm	9.0	9.4
	Cond.	500	500
	Temp(C)	20.0	20.0
13	pH	8.1	8.1
	O2 ppm	9.2	9.4
	Cond.	498	490
	Temp(C)	20.0	20.0
6	pH	8.1	8.1
	O2 ppm	9.2	9.6
	Cond.	498	488
	Temp(C)	20.0	20.0
Control	pH	8.1	8.2
	O2 ppm	9.6	9.7
	Cond.	492	474
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05900002

TEST CONDITIONS

Company : Novacor Chemicals Ltd.
 Mooretown, ONT
 (380105)
 Region : Southwest
 Industry : Organic Chemical

Control point : combined effluent, (100)

Laboratory : Pollutech
 Sampling Method : Grab
 Sampled By : P. Tymstra
 Date Collected : 01/03/90
 Received : 01/03/90
 Tested : 01/03/90 at: 1530

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00 48:00		%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900002

TEST CONC.	ELAPSED TIME	
%	00:00 48:00	

100	pH	7.6	7.7
	O2 ppm	8.6	8.0
	Cond.	720	720
	Temp(C)	20.0	20.0
50	pH	8.1	8.1
	O2 ppm	8.7	8.7
	Cond.	600	600
	Temp(C)	20.0	20.0
26	pH	8.2	8.2
	O2 ppm	8.7	8.7
	Cond.	560	560
	Temp(C)	20.0	20.0
13	pH	8.3	8.3
	O2 ppm	8.7	8.7
	Cond.	550	550
	Temp(C)	20.0	20.0
6	pH	8.3	8.3
	O2 ppm	8.8	8.8
	Cond.	490	490
	Temp(C)	20.0	20.0
Control	pH	8.2	8.2
	O2 ppm	9.2	9.2
	Cond.	490	490
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05900021

TEST CONDITIONS

Company : Novacor Chemicals Ltd.
 : Mooretown, ONT
 : (380105)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : Pollutech
 Sampling Method : Grab
 Sampled By : P. Tymstra
 Date Collected : 01/24/90
 Received : 01/24/90
 Tested : 01/24/90 at: 1200
 Type of Bioassay : STATIC
 : (Daphnia magna Acute Lethality Toxicity
 : Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00	48:00	%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

 SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900021

TEST CONC. %	ELAPSED TIME	
	00:00	48:00

100	pH	7.5	7.7
	O2 ppm	7.8	8.7
	Cond.	740	740
	Temp(C)	20.0	20.0
50	pH	7.8	7.9
	O2 ppm	8.4	8.8
	Cond.	610	610
	Temp(C)	20.0	20.0
26	pH	7.9	8.0
	O2 ppm	8.8	9.0
	Cond.	580	580
	Temp(C)	20.0	20.0
13	pH	8.0	8.1
	O2 ppm	9.0	9.2
	Cond.	520	520
	Temp(C)	20.0	20.0
6	pH	8.1	8.1
	O2 ppm	9.3	9.2
	Cond.	510	510
	Temp(C)	20.0	20.0
Control	pH	8.1	8.0
	O2 ppm	9.4	9.2
	Cond.	492	496
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05900046

TEST CONDITIONS

Company : Novacor Chemicals Ltd.
 Mooretown, ONT
 (380105)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : Pollutech
 Sampling Method : Grab
 Sampled By : C. Ferguson
 Date Collected : 02/21/90
 Received : 02/21/90
 Tested : 02/22/90 at: 1050
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00	48:00	%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal
 95% fid. limits : 0.0 - 0.0 %
 Comments :

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900046

TEST CONC.	ELAPSED TIME	
%	00:00	48:00

100	pH	7.8	7.9
	O2 ppm	8.5	8.5
	Cond.	590	600
	Temp(C)	20.0	20.0
50	pH	8.2	8.1
	O2 ppm	8.4	8.5
	Cond.	525	550
	Temp(C)	20.0	20.0
26	pH	8.3	8.3
	O2 ppm	8.6	8.6
	Cond.	510	525
	Temp(C)	20.0	20.0
13	pH	8.4	8.3
	O2 ppm	8.6	8.9
	Cond.	495	495
	Temp(C)	20.0	20.0
6	pH	8.4	8.4
	O2 ppm	8.8	8.8
	Cond.	485	471
	Temp(C)	20.0	20.0
Control	pH	8.5	8.3
	O2 ppm	9.3	8.8
	Cond.	488	462
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05900064

TEST CONDITIONS

Company : Novacor Chemicals Ltd.
 Mooretown, ONT
 (380105)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : Pollutech
 Sampling Method : Grab
 Sampled By : C. Ferguson
 Date Collected : 03/21/90
 Received : 03/21/90
 Tested : 03/24/90 at: 1230
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00 48:35		%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900064

TEST CONC. %	ELAPSED TIME	
	00:00 48:35	

100	pH	8.1	7.9
	O2 ppm	8.8	8.4
	Cond.	610	610
	Temp(C)	20.0	20.0
50	pH	8.2	8.1
	O2 ppm	8.7	8.6
	Cond.	580	590
	Temp(C)	20.0	20.0
26	pH	8.3	8.2
	O2 ppm	8.9	8.8
	Cond.	530	540
	Temp(C)	20.0	20.0
13	pH	8.3	8.3
	O2 ppm	9.2	9.0
	Cond.	540	530
	Temp(C)	20.0	20.0
6	pH	8.3	8.3
	O2 ppm	9.3	9.3
	Cond.	520	520
	Temp(C)	20.0	20.0
Control	pH	8.3	8.3
	O2 ppm	9.4	9.4
	Cond.	500	510
	Temp(C)	20.0	20.0

COMPANY: Polysar Limited, Sarnia
(30007)
SECTOR: Organic Chemical
REGION: Southwest

SUMMARY

The data for forty trout bioassays, conducted on process effluent, batch effluent, combined effluent and once through cooling water samples collected between October 1989 and March 1990, were provided by Polysar Limited. Twenty-two of twenty-four samples collected from the four combined effluent discharge locations (0200, 0400, 0500, 1100) were determined to have been non-acutely lethal to test fish. The other two combined effluent samples were determined to have been acutely lethal. Statistically, the percentage effluent required to kill 50 % of the test fish by the end of the four days exposure was 3.2 % (control point 0200 - March). The combined effluent sample (0500) collected in February was also lethal, causing 100 % mortality in non-diluted effluent. All the samples collected from the locations; OTCW 1400, OTCW 1600, batch 1700 and process effluent 1800 were determined to have been non-acutely lethal to test fish.

combined effluent

05890083	sampled: 10/09/89	non-lethal
95% fid. limits:	0.0 -	0.0 %
comments:		
05890096	sampled: 11/06/89	non-lethal
95% fid. limits:	0.0 -	0.0 %
comments:		
05890122	sampled: 12/04/89	non-lethal
95% fid. limits:	0.0 -	0.0 %
comments:		
05900001	sampled: 01/01/90	non-lethal
95% fid. limits:	0.0 -	0.0 %
comments:		
05900023	sampled: 02/05/90	non-lethal
95% fid. limits:	0.0 -	0.0 %
comments:		
05900049	sampled: 03/05/90	LC50: 3.2 %
95% fid. limits:	0.0 -	0.0 %
comments:		

Polysar Limited (continued)

process effluent

combined effluent

05890081 sampled: 10/09/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05890103 sampled: 11/13/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05890123 sampled: 12/11/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900016 sampled: 01/08/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900029 sampled: 02/12/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900068 sampled: 03/26/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

combined effluent

05890085 sampled: 10/16/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05890114 sampled: 11/20/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05890132 sampled: 12/18/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900014 sampled: 01/15/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900038 sampled: 02/19/90 LC50: >100 %
95% fid. limits: 0.0 - 100.0 %
comments: Single Concentration Test - 100% mortality

Polysar Limited (continued)

05900060 sampled: 03/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

emergency overflow

process effluent

process effluent

process effluent

combined effluent

05890087 sampled: 10/16/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05890113 sampled: 11/20/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05890131 sampled: 12/18/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900012 sampled: 01/15/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900040 sampled: 02/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900059 sampled: 03/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

emergency overflow

storm water

OT cooling water

05890095 sampled: 11/06/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900022 sampled: 02/05/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

Polysar Limited (continued)

storm water

OT cooling water

05890097 sampled: 11/06/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900024 sampled: 02/05/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

Batch

05890091 sampled: 10/30/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05890115 sampled: 11/20/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05890134 sampled: 12/18/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900017 sampled: 01/15/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900041 sampled: 02/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900061 sampled: 03/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

process effluent

05890086 sampled: 10/16/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05890112 sampled: 11/20/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05890133 sampled: 12/18/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

Polysar Limited (continued)

05900013 sampled: 01/15/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900039 sampled: 02/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900058 sampled: 03/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

process effluent

storm water

storm water

storm water

rain gauge

intake water

TOXICITY TEST REPORT

Sample: 05890083

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (200)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : T. Moran
Date Collected : 10/09/89
Received : 10/09/89
Tested : 10/10/89 at: 1600
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY %
	%	00:00	17:00	41:45	65:45	96:15
100	0	0	0	0	0	0
75	0	0	0	0	0	0
56	0	0	0	0	0	0
25	0	0	0	0	0	0
10	0	0	0	0	0	0
1	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :TOXICITY TEST PARAMETERS

Sample Number: 05890083

TEST CONC. %	E L A P S E D T I M E				
	00:00	17:00	41:45	65:45	96:15

100	pH	7.7	7.5	7.7	7.5	7.5
	O2 ppm	9.8	9.1	9.2	7.5	8.9
	Cond.	175				180
	Temp(C)	15.0	15.0	15.0	15.0	15.0
75	pH	7.5	7.5	7.7	7.5	7.5
	O2 ppm	9.6	9.2	9.2	8.8	8.8
	Cond.	175				180
	Temp(C)	15.0	15.0	15.0	15.0	15.0
56	pH	7.4	7.5	7.6	7.4	7.4
	O2 ppm	9.3	9.2	8.4	7.8	7.8
	Cond.	175				180
	Temp(C)	15.0	15.0	15.0	15.0	15.0
25	pH	7.3	7.4	7.6	7.5	7.4
	O2 ppm	9.1	9.1	8.9	8.5	8.7
	Cond.	175				180
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.2	7.4	7.5	7.5	7.4
	O2 ppm	9.0	9.1	8.6	8.4	8.6
	Cond.	175				180
	Temp(C)	15.0	15.0	15.0	15.0	15.0
1	pH	7.2	7.4	7.5	7.5	7.4
	O2 ppm	9.0	9.0	9.0	8.5	8.5
	Cond.	175				180
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.0	7.3	7.2	7.3	7.3
	O2 ppm	9.1	8.7	8.2	7.8	7.8
	Cond.	173				180
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.0	7.4	7.3	7.4	7.3
	O2 ppm	9.2	9.5	9.1	8.8	8.8
	Cond.	170				180
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 05890096

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (200)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C. Ferguson
Date Collected : 11/06/89
Received : 11/06/89
Tested : 11/07/89 at: 1800
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	22:00	40:30	64:00	96:00	%
100	0	0	0	0	0	0
75	0	0	0	0	0	0
56	0	0	0	0	0	0
25	0	0	0	0	0	0
10	0	0	0	0	0	0
1	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890096

TEST CONC. %	ELAPSED TIME				
	00:00	22:00	40:30	64:00	96:00

100	pH	7.9	7.6	7.8	7.9	7.8
	O2 ppm	9.8	9.8	10.0	9.7	10.2
	Cond.	172				170
	Temp(C)	15.0	15.0	15.0	15.0	15.0
75	pH	7.6	7.6	7.8	7.9	7.7
	O2 ppm	9.9	9.6	9.7	9.4	9.8
	Cond.	171				170
	Temp(C)	15.0	15.0	15.0	15.0	15.0
56	pH	7.5	7.5	7.8	7.9	7.8
	O2 ppm	9.9	9.8	10.1	9.8	10.2
	Cond.	170				170
	Temp(C)	15.0	15.0	15.0	15.0	15.0
25	pH	7.5	7.5	7.8	7.8	7.8
	O2 ppm	9.9	10.0	10.0	9.7	10.2
	Cond.	167				170
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.2	7.5	7.7	7.8	7.7
	O2 ppm	8.9	10.0	9.6	9.6	9.8
	Cond.	167				169
	Temp(C)	15.0	15.0	15.0	15.0	15.0
1	pH	7.2	7.4	7.8	7.9	7.8
	O2 ppm	10.0	10.0	10.1	9.8	10.1
	Cond.	167				168
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.2	7.4	7.7	7.7	7.7
	O2 ppm	10.0	9.8	10.2	9.8	10.3
	Cond.	167				170
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.2	7.4	7.7	7.7	7.7
	O2 ppm	10.0	10.2	9.8	9.6	9.8
	Cond.	169				170
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 05890122

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (200)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : P.Tymstra
Date Collected : 12/04/89
Received : 12/04/89
Tested : 12/05/89 at: 1655
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	16:45	45:45	66:45	96:15	%
100	0	0	0	0	0	0
75	0	0	0	0	0	0
56	0	0	0	0	0	0
25	0	0	0	0	0	0
10	0	0	0	0	0	0
1	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0
96 Hour LC50 : Non-lethal						
95% fid. limits : 0.0 - 0.0 %						
Comments :						

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890122

TEST CONC. %	ELAPSED TIME				
	00:00	16:45	45:45	66:45	96:15
100	pH	7.8	7.6	7.8	7.8
	O2 ppm	11.3	8.2	9.1	8.8
	Cond.	178			182
	Temp(C)	15.0	15.0	15.0	15.0
75	pH	7.6	7.6	7.8	7.7
	O2 ppm	11.2	8.3	9.3	8.9
	Cond.	178			182
	Temp(C)	15.0	15.0	15.0	15.0
56	pH	7.4	7.6	7.8	7.7
	O2 ppm	11.2	8.3	9.5	8.8
	Cond.	179			182
	Temp(C)	15.0	15.0	15.0	15.0
25	pH	7.3	7.5	7.7	7.7
	O2 ppm	11.3	8.2	8.8	8.5
	Cond.	180			182
	Temp(C)	15.0	15.0	15.0	15.0
10	pH	7.2	7.5	7.7	7.7
	O2 ppm	11.3	8.2	9.1	8.6
	Cond.	180			185
	Temp(C)	15.0	15.0	15.0	15.0
1	pH	7.2	7.5	7.6	7.7
	O2 ppm	11.2	8.2	8.8	8.4
	Cond.	181			188
	Temp(C)	15.0	15.0	15.0	15.0
Control	pH	7.0	7.5	7.7	7.7
	O2 ppm	10.5	8.6	9.4	9.3
	Cond.	172			182
	Temp(C)	15.0	15.0	15.0	15.0
Control	pH	7.1	7.5	7.6	7.7
	O2 ppm	11.2	8.7	9.2	9.0
	Cond.	176			182
	Temp(C)	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 05900001

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (200)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : T.Moran
Date Collected : 01/01/90
Received : 01/01/90
Tested : 01/02/90 at: 1200
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	28:00	45:00	69:30	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900001

TEST CONC. %	ELAPSED TIME				
	00:00	28:00	45:00	69:30	96:00
100	pH	7.8	7.5	7.7	7.7
	O2 ppm	11.4	9.0	9.0	9.6
	Cond.	165			188
	Temp(C)	15.0	15.0	15.0	15.0
100	pH	7.9	7.5	7.7	7.7
	O2 ppm	11.2	9.1	9.3	9.7
	Cond.	165			189
	Temp(C)	15.0	15.0	15.0	15.0
Control	pH	7.4	7.4	7.5	7.6
	O2 ppm	10.6	9.2	9.1	9.1
	Cond.	165			190
	Temp(C)	15.0	15.0	15.0	15.0
Control	pH	7.4	7.3	7.5	7.6
	O2 ppm	10.6	8.6	8.9	9.0
	Cond.	165			180
	Temp(C)	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 05900023

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (200)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C.Ferguson
Date Collected : 02/05/90
Received : 02/05/90
Tested : 02/07/90 at: 1630
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY	
	%	00:00	24:10	45:00	68:10	96:00	%
100	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments :

TOXICITY TEST PARAMETERS

Sample Number: 05900023

TEST CONC. %	ELAPSED TIME				
		00:00	24:10	45:00	68:10 96:00
100	pH	7.6			7.7
	O2 ppm	10.2			9.8
	Cond.	165			175
	Temp(C)	15.0			15.0
100	pH	7.6			7.7
	O2 ppm	10.1			9.6
	Cond.	166			175
	Temp(C)	15.0			15.0
Control	pH	7.1			7.7
	O2 ppm	10.4			9.6
	Cond.	162			175
	Temp(C)	15.0			15.0
Control	pH	7.1			7.7
	O2 ppm	10.4			9.7
	Cond.	162			176
	Temp(C)	15.0			15.0

TOXICITY TEST REPORT

Sample: 05900049

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (200)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C. Ferguson
Date Collected : 03/05/90
Received : 03/05/90
Tested : 03/06/90 at: 1100
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
	%	00:00	24:00	48:00	72:00	97:30
100	0	10	10	10	10	100
75	0	10	10	10	10	100
56	0	10	10	10	10	100
25	0	10	10	10	10	100
10	0	10	10	10	10	100
1	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : 3.2 %
95% fid. limits : 0.0 - 0.0 %
Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : Spearman-Kärber

TOXICITY TEST PARAMETERS

Sample Number: 05900049

TEST ELAPSED TIME
CONC. % 00:00 24:00 48:00 72:00 97:30

100	pH	8.1	8.0		
	O2 ppm	9.9	9.9		
	Cond.	192	189		
	Temp(C)	15.0	15.0		
75	pH	7.9	7.9		
	O2 ppm	9.8	10.0		
	Cond.	186	185		
	Temp(C)	15.0	15.0		
56	pH	7.8	7.8		
	O2 ppm	10.1	9.8		
	Cond.	180	180		
	Temp(C)	15.0	15.0		
25	pH	7.7	7.7		
	O2 ppm	10.2	9.8		
	Cond.	171	170		
	Temp(C)	15.0	15.0		
10	pH	7.6	7.6		
	O2 ppm	10.3	9.5		
	Cond.	168	170		
	Temp(C)	15.0	15.0		
1	pH	7.6		7.8	
	O2 ppm	10.3		9.2	
	Cond.	166		172	
	Temp(C)	15.0		15.0	
Control	pH	7.4		7.5	
	O2 ppm	10.2		9.6	
	Cond.	167		171	
	Temp(C)	15.0		15.0	
Control	pH	7.5		7.4	
	O2 ppm	10.3		9.3	
	Cond.	168		172	
	Temp(C)	15.0		15.0	

TOXICITY TEST REPORT

Sample: 05890081

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (400)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : T. Moran
Date Collected : 10/09/89
Received : 10/09/89
Tested : 10/10/89 at: 1600
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY %
	%	00:00	17:00	41:30	65:30	96:00
100	0	0	0	0	0	0
75	0	0	0	0	0	0
56	0	0	0	0	0	0
25	0	0	0	0	0	0
10	0	0	0	0	0	0
1	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890081

TEST CONC. %	ELAPSED TIME				
		00:00	17:00	41:30	65:30 96:00
100	pH	7.8	7.4	7.5	7.4
	O2 ppm	9.8	8.6	8.8	8.2
	Cond.	221			220
	Temp(C)	15.0	15.0	15.0	15.0
75	pH	7.5	7.4	7.5	7.4
	O2 ppm	9.4	8.7	8.6	8.2
	Cond.	210			210
	Temp(C)	15.0	15.0	15.0	15.0
56	pH	7.3	7.5	7.6	7.5
	O2 ppm	9.2	8.9	9.0	8.6
	Cond.	200			200
	Temp(C)	15.0	15.0	15.0	15.0
25	pH	7.1	7.3	7.5	7.4
	O2 ppm	9.2	8.9	8.9	8.8
	Cond.	190			190
	Temp(C)	15.0	15.0	15.0	15.0
10	pH	7.2	7.3	7.4	7.3
	O2 ppm	9.0	8.4	8.4	8.2
	Cond.	180			185
	Temp(C)	15.0	15.0	15.0	15.0
1	pH	7.2	7.4	7.5	7.4
	O2 ppm	9.0	9.2	9.0	8.7
	Cond.	179			180
	Temp(C)	15.0	15.0	15.0	15.0
Control	pH	7.0	7.3	7.2	7.3
	O2 ppm	9.1	8.7	8.2	7.8
	Cond.	173			180
	Temp(C)	15.0	15.0	15.0	15.0
Control	pH	7.0	7.4	7.3	7.4
	O2 ppm	9.2	9.5	9.1	8.8
	Cond.	170			180
	Temp(C)	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 05890103

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (400)
Laboratory : Pollutech
Sampling Method : grab
Sampled By : C. Ferguson
Date Collected : 11/13/89
Received : 11/13/89
Tested : 11/14/89 at: 1330
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
%	00:00	23:10	45:10	69:10	96:00	%
100	0	0	0	0	0	0
75	0	0	0	0	0	0
56	0	0	0	0	0	0
25	0	0	0	0	0	0
10	0	0	0	0	0	0
1	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 05890103

TEST CONC. %	E L A P S E D T I M E					
		00:00	23:10	45:10	69:10	96:00
100	pH	7.8	7.7	7.8	7.8	7.8
	O2 ppm	10.1	9.5	9.9	10.6	10.0
	Cond.	190				189
	Temp(C)	15.0	15.0	15.0	15.0	15.0
75	pH	7.6	7.7	7.7	7.8	7.9
	O2 ppm	10.0	9.6	10.0	10.6	10.2
	Cond.	185				182
	Temp(C)	15.0	15.0	15.0	15.0	15.0
56	pH	7.4	7.6	7.7	7.8	7.8
	O2 ppm	10.0	9.5	9.9	10.4	9.9
	Cond.	180				180
	Temp(C)	15.0	15.0	15.0	15.0	15.0
25	pH	7.2	7.6	7.7	7.8	7.8
	O2 ppm	9.7	9.6	9.9	10.3	9.8
	Cond.	175				172
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.2	7.7	7.8	7.8	7.9
	O2 ppm	9.6	9.6	10.0	10.4	10.2
	Cond.	171				171
	Temp(C)	15.0	15.0	15.0	15.0	15.0
1	pH	7.2	7.7	7.7	7.8	7.9
	O2 ppm	9.5	9.5	9.8	10.3	10.3
	Cond.	169				170
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.2	7.6	7.7	7.7	7.8
	O2 ppm	10.0	9.9	9.9	10.4	9.5
	Cond.	169				169
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.2	7.6	7.7	7.8	7.6
	O2 ppm	9.8	9.9	9.8	10.0	9.2
	Cond.	169				172
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 05890123

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical

Control point : combined effluent, (400)

Laboratory : Pollutech
Sampling Method : Grab
Sampled By : P. Tymstra
Date Collected : 12/11/89
Received : 12/11/89
Tested : 12/12/89 at: 1430

Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	20:10	44:10	68:10	97:10	%
100	0	0	0	0	0	0
75	0	0	0	0	0	0
56	0	0	0	0	0	0
25	0	0	0	0	0	0
10	0	0	0	0	0	0
1	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890123

TEST CONC. %	ELAPSED TIME				
	00:00	20:10	44:10	68:10	97:10
100	pH	7.5	7.6	7.7	7.7
	O2 ppm	10.4	9.4	9.8	9.4
	Cond.	172			180
	Temp(C)	15.0	15.0	15.0	15.0
75	pH	7.5	7.6	7.7	7.8
	O2 ppm	10.8	9.1	8.6	9.5
	Cond.	172			180
	Temp(C)	15.0	15.0	15.0	15.0
56	pH	7.5	7.6	7.7	7.7
	O2 ppm	10.8	9.1	8.6	9.4
	Cond.	170			180
	Temp(C)	15.0	15.0	15.0	15.0
25	pH	7.5	7.6	7.7	7.7
	O2 ppm	11.1	9.2	8.7	9.6
	Cond.	170			182
	Temp(C)	15.0	15.0	15.0	15.0
10	pH	7.5	7.6	7.7	7.8
	O2 ppm	11.2	9.0	8.5	9.5
	Cond.	169			182
	Temp(C)	15.0	15.0	15.0	15.0
1	pH	7.5	7.7	7.8	7.8
	O2 ppm	11.1	9.4	9.0	9.4
	Cond.	169			182
	Temp(C)	15.0	15.0	15.0	15.0
Control	pH	7.4	7.6	7.7	7.8
	O2 ppm	11.2	9.6	9.2	9.5
	Cond.	170			180
	Temp(C)	15.0	15.0	15.0	15.0
Control	pH	7.4	7.6	7.7	7.8
	O2 ppm	11.2	9.6	9.0	9.3
	Cond.	168			178
	Temp(C)	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 05900016

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (400)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : P. Tymstra
Date Collected : 01/08/90
Received : 01/08/90
Tested : 01/09/90 at: 1730
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY	
	%	00:00	18:10	42:00	64:10	95:00	%
100	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900016

TEST CONC. %		ELAPSED TIME				
		00:00	18:10	42:00	64:10	95:00
100	pH	7.3	7.7	7.6	7.5	7.7
	O2 ppm	9.8	8.8	8.8	7.9	8.2
	Cond.	180				191
	Temp(C)	15.0	15.0	15.0	15.0	15.0
100	pH	7.3	7.7	7.6	7.6	7.7
	O2 ppm	10.0	9.0	8.9	8.2	8.4
	Cond.	179				191
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.4	7.5	7.6	7.6	7.7
	O2 ppm	10.2	10.4	9.0	8.7	8.6
	Cond.	170				180
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.4	7.5	7.6	7.7	7.7
	O2 ppm	10.2	10.2	9.1	8.2	8.5
	Cond.	171				182
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 05900029

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (400)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C. Ferguson
Date Collected : 02/12/90
Received : 02/12/90
Tested : 02/14/90 at: 1400
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. ONE, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
	%	00:00	26:00	44:00	68:00	
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900029

TEST CONC. %	ELAPSED TIME				
	00:00	26:00	44:00	68:00	97:00
100	pH 7.8				7.6
	O2 ppm 9.9				8.5
	Cond. 185				198
	Temp(C) 15.0				15.0
100	pH 7.8				7.5
	O2 ppm 9.7				8.7
	Cond. 185				195
	Temp(C) 15.0				15.0
Control	pH 7.6				7.7
	O2 ppm 10.0				9.6
	Cond. 158				175
	Temp(C) 15.0				15.0
Control	pH 7.6				7.7
	O2 ppm 10.2				9.6
	Cond. 160				175
	Temp(C) 15.0				15.0

TOXICITY TEST REPORT

Sample: 05900068

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (400)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C. Ferguson
Date Collected : 03/26/90
Received : 03/26/90
Tested : 03/28/90 at: 1630
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	25:10	42:00	71:20	96:00	%
100	0	0	0	0	0	0
75	0	0	0	0	0	0
56	0	0	0	0	0	0
25	0	0	0	0	0	0
10	0	0	0	0	0	0
1	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900068

TEST CONC.	ELAPSED TIME				
	%	00:00	25:10	42:00	71:20

100	pH	7.8				7.6
	O2 ppm	10.1				9.4
	Cond.	188				190
	Temp(C)	15.0				15.0
75	pH	7.6				7.3
	O2 ppm	10.3				9.3
	Cond.	181				186
	Temp(C)	15.0				15.0
56	pH	7.5				7.4
	O2 ppm	10.4				9.2
	Cond.	179				183
	Temp(C)	15.0				15.0
25	pH	7.4				7.4
	O2 ppm	10.5				9.2
	Cond.	170				179
	Temp(C)	15.0				15.0
10	pH	7.4				7.4
	O2 ppm	10.5				9.2
	Cond.	168				177
	Temp(C)	15.0				15.0
1	pH	7.3				7.4
	O2 ppm	10.6				9.6
	Cond.	165				175
	Temp(C)	15.0				15.0
Control	pH	7.3				7.5
	O2 ppm	10.6				9.3
	Cond.	162				172
	Temp(C)	15.0				15.0
Control	pH	7.3				7.5
	O2 ppm	10.6				9.4
	Cond.	165				173
	Temp(C)	15.0				15.0

TOXICITY TEST REPORT

Sample: 05890085

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (500)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C.Ferguson
Date Collected : 10/16/89
Received : 10/16/89
Tested : 10/17/89 at: 1145
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY %
	%	00:00	21:55	46:55	69:55	96:55
100	0	0	0	0	0	0
75	0	0	0	0	0	0
56	0	0	0	0	0	0
25	0	0	0	0	0	0
10	0	0	0	0	0	0
1	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890085

TEST CONC. %	E L A P S E D T I M E				
	00:00	21:55	46:55	69:55	96:55

100	pH	8.3	7.5	7.4	7.5	7.4
	O2 ppm	9.8	8.3	8.2	8.7	9.0
	Cond.	183				181
	Temp(C)	15.0	15.0	15.0	15.0	15.0
75	pH	7.9	7.4	7.4	7.4	7.3
	O2 ppm	9.3	7.8	7.8	8.5	8.9
	Cond.	180				180
	Temp(C)	15.0	15.0	15.0	15.0	15.0
56	pH	7.5	7.4	7.4	7.5	7.3
	O2 ppm	9.1	8.2	8.0	8.3	9.0
	Cond.	180				178
	Temp(C)	15.0	15.0	15.0	15.0	15.0
25	pH	7.1	7.4	7.4	7.5	7.4
	O2 ppm	8.6	8.3	8.2	8.9	9.1
	Cond.	175				175
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.0	7.4	7.4	7.5	7.4
	O2 ppm	8.6	8.3	8.6	8.9	9.4
	Cond.	170				172
	Temp(C)	15.0	15.0	15.0	15.0	15.0
1	pH	7.0	7.5	8.5	7.6	7.4
	O2 ppm	8.5	9.0	8.9	9.3	9.6
	Cond.	170				172
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	6.9	7.3	7.3	7.4	7.4
	O2 ppm	8.6	8.2	8.5	8.5	8.9
	Cond.	167				172
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	6.9	7.1	7.3	7.3	7.4
	O2 ppm	8.8	7.7	8.5	8.5	9.0
	Cond.	170				174
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 05890114

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (500)
Laboratory : Pollutech
Sampling Method : grab
Sampled By : C. Ferguson
Date Collected : 11/20/89
Received : 11/20/89
Tested : 11/21/89 at: 1200
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	23:40	51:00	75:30	96:00	%
100	0	0	0	0	0	0
75	0	0	0	0	0	0
56	0	0	0	0	0	0
25	0	0	0	0	0	0
10	0	0	0	0	0	0
1	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 05890114

TEST CONC. %	ELAPSED TIME				
	00:00	23:40	51:00	75:30	96:00

100	pH	8.2	7.7	7.8	7.8	7.7
	O2 ppm	10.2	9.6	9.4	9.7	9.8
	Cond.	170				175
	Temp(C)	15.0	15.0	15.0	15.0	15.0
75	pH	7.8	7.6	7.8	7.9	7.8
	O2 ppm	10.2	9.9	9.4	9.8	10.0
	Cond.	172				172
	Temp(C)	15.0	15.0	15.0	15.0	15.0
56	pH	7.6	7.7	7.7	7.8	7.7
	O2 ppm	9.9	9.9	9.0	9.8	9.8
	Cond.	172				170
	Temp(C)	15.0	15.0	15.0	15.0	15.0
25	pH	7.2	7.6	7.8	7.8	7.7
	O2 ppm	9.9	9.9	9.2	9.7	9.9
	Cond.	171				170
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.2	7.6	7.8	7.8	7.7
	O2 ppm	9.8	10.1	9.4	9.8	9.8
	Cond.	171				169
	Temp(C)	15.0	15.0	15.0	15.0	15.0
1	pH	7.2	7.7	7.8	7.8	7.7
	O2 ppm	9.9	10.5	9.4	9.9	10.0
	Cond.	170				169
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.2	7.5	7.7	7.7	7.7
	O2 ppm	9.7	10.4	9.8	10.2	10.2
	Cond.	170				171
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.1	7.6	7.9	7.8	7.7
	O2 ppm	9.9	10.3	9.8	10.4	10.4
	Cond.	171				170
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 05890132

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (500)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C. Ferguson
Date Collected : 12/18/89
Received : 12/18/89
Tested : 12/18/89 at: 1500
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
%	00:00	19:30	43:30	72:30	96:15	%
100	0	0	0	0	0	0
75	0	0	0	0	0	0
56	0	0	0	0	0	0
25	0	0	0	0	0	0
10	0	0	0	0	0	0
1	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0
96 Hour LC50	: Non-lethal					
95% fid. limits	: 0.0 - 0.0 %					
Comments	:					

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890132

TEST CONC. %		ELAPSED TIME				
		00:00	19:30	43:30	72:30	96:15
100	pH	8.2	7.9	8.0	7.8	7.8
	O2 ppm	11.2	9.0	10.2	8.4	9.6
	Cond.	181				188
	Temp(C)	15.0	15.0	15.0	15.0	15.0
75	pH	8.1	7.9	7.9	7.8	7.8
	O2 ppm	11.2	9.2	9.8	9.3	9.5
	Cond.	180				186
	Temp(C)	15.0	15.0	15.0	15.0	15.0
56	pH	8.0	7.9	7.9	7.7	7.8
	O2 ppm	10.7	9.5	9.8	9.2	9.6
	Cond.	180				186
	Temp(C)	15.0	15.0	15.0	15.0	15.0
25	pH	7.8	7.8	7.9	7.7	7.9
	O2 ppm	10.4	9.6	9.8	9.2	9.6
	Cond.	178				184
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.8	7.8	7.8	7.6	7.7
	O2 ppm	10.3	9.6	9.2	8.9	9.0
	Cond.	177				185
	Temp(C)	15.0	15.0	15.0	15.0	15.0
1	pH	7.6	7.6	7.8	7.6	7.7
	O2 ppm	10.3	9.5	9.6	9.2	9.0
	Cond.	177				185
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.7	7.6	7.8	7.6	7.8
	O2 ppm	10.5	10.0	9.3	9.2	9.8
	Cond.	170				176
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.7	7.6	7.8	7.7	7.8
	O2 ppm	10.4	9.9	9.4	9.4	9.6
	Cond.	170				176
	Temp(C)	15.0	15.0	15.0	15.0	15.0

MISA Trout

TOXICITY TEST REPORT

Sample: 05900014

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (500)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : P. Tymstra
Date Collected : 01/15/90
Received : 01/15/90
Tested : 01/15/90 at: 1750
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY	
	%	00:00	17:50	39:50	64:20		94:50
100	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900014

TEST CONC. %	E L A P S E D T I M E				
	00:00	17:50	39:50	64:20	94:50

100	pH	8.2	7.7	7.6	7.6	7.4
	O2 ppm	10.5	8.8	8.7	9.0	9.0
	Cond.	174				189
	Temp(C)	15.0	15.0	15.0	15.0	15.0
100	pH	7.7	7.7	7.7	7.6	7.3
	O2 ppm	10.4	8.9	8.5	8.8	8.6
	Cond.	175				188
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.7	7.7	7.6	7.5	7.4
	O2 ppm	9.9	9.0	9.0	9.2	9.2
	Cond.	179				182
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.7	7.7	7.6	7.5	7.4
	O2 ppm	9.7	8.8	8.8	9.0	8.8
	Cond.	179				181
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 05900038

TEST CONDITIONS

Company : Polysar Limited
 : Sarnia, ONT
 : (30007)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (500)
 Laboratory : Pollutech
 Sampling Method : Grab
 Sampled By : C.Ferguson
 Date Collected : 02/19/90
 Received : 02/19/90
 Tested : 02/20/90 at: 1710

Type of Bioassay : STATIC
 : (Protocol to determine the acute lethality
 : of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00	01:30	%
100	0	10	100
Control	0	0	0

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 100.0 %

Comments : Single Concentration Test - 100% mortality

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900038

TEST CONC. %	ELAPSED TIME	
	00:00	01:30

100	pH	8.3	8.2
	O2 ppm	10.2	10.0
	Cond.	178	180
	Temp(C)	15.0	15.0
Control	pH	7.7	7.7
	O2 ppm	9.8	9.8
	Cond.	160	160
	Temp(C)	15.0	15.0

TOXICITY TEST REPORT

Sample: 05900060

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (500)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C. Ferguson
Date Collected : 03/19/90
Received : 03/19/90
Tested : 03/21/90 at: 1330
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME,*1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY %
	%	00:00	23:25	43:15	75:00	96:00
100	0	0	0	0	0	0
75	0	0	0	0	0	0
56	0	0	0	0	0	0
25	0	0	0	0	0	0
10	0	0	0	0	0	0
1	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900060

TEST ELAPSED TIME
CONC. % 00:00 23:25 43:15 75:00 96:00

100	pH	7.9	7.6
	O2 ppm	11.8	9.7
	Cond.	169	180
	Temp(C)	15.0	15.0
75	pH	7.7	7.7
	O2 ppm	11.6	9.8
	Cond.	168	178
	Temp(C)	15.0	15.0
56	pH	7.6	7.7
	O2 ppm	11.4	9.9
	Cond.	165	177
	Temp(C)	15.0	15.0
25	pH	7.6	7.7
	O2 ppm	11.4	9.9
	Cond.	162	176
	Temp(C)	15.0	15.0
10	pH	7.5	7.6
	O2 ppm	11.2	9.9
	Cond.	160	175
	Temp(C)	15.0	15.0
1	pH	7.5	7.6
	O2 ppm	11.2	9.9
	Cond.	160	172
	Temp(C)	15.0	15.0
Control	pH	7.5	7.7
	O2 ppm	12.1	9.8
	Cond.	166	189
	Temp(C)	15.0	15.0
Control	pH	7.6	7.8
	O2 ppm	11.7	9.8
	Cond.	168	182
	Temp(C)	15.0	15.0

TOXICITY TEST REPORT

Sample: 05890087

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (1100)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C.Ferguson
Date Collected : 10/16/89
Received : 10/16/89
Tested : 10/17/89 at: 1145
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
	%	00:00	21:55	46:55	76:55	96:55
100	0	0	0	0	0	0
75	0	0	0	0	0	0
56	0	0	0	0	0	0
25	0	0	0	0	0	0
10	0	0	0	0	0	0
1	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890087

TEST CONC. %	E L A P S E D T I M E				
	00:00	21:55	46:55	76:55	96:55

100	pH	8.0	7.5	7.5	7.6	7.5
	O2 ppm	9.4	8.3	9.0	9.0	9.2
	Cond.	200				189
	Temp(C)	15.0	15.0	15.0	15.0	15.0
75	pH	7.5	7.4	7.4	7.6	7.5
	O2 ppm	9.3	8.5	8.7	8.7	9.1
	Cond.	190				184
	Temp(C)	15.0	15.0	15.0	15.0	15.0
56	pH	7.3	7.4	7.4	7.6	7.5
	O2 ppm	9.0	8.5	8.5	9.0	9.3
	Cond.	185				181
	Temp(C)	15.0	15.0	15.0	15.0	15.0
25	pH	7.3	7.4	7.4	7.6	7.4
	O2 ppm	8.6	8.5	8.9	9.0	9.1
	Cond.	175				175
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.1	7.3	7.4	7.5	7.4
	O2 ppm	8.4	8.5	8.9	8.9	9.3
	Cond.	170				171
	Temp(C)	15.0	15.0	15.0	15.0	15.0
1	pH	7.0	7.3	7.3	7.5	7.5
	O2 ppm	8.4	8.7	8.8	9.0	9.4
	Cond.	170				173
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	6.9	7.3	7.3	7.4	7.4
	O2 ppm	8.6	8.2	8.1	8.5	8.9
	Cond.	167				172
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	6.9	7.1	7.2	7.3	7.4
	O2 ppm	8.8	7.7	8.2	8.5	9.0
	Cond.	170				174
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 05890113

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (1100)
Laboratory : Pollutech
Sampling Method : grab
Sampled By : C. Ferguson
Date Collected : 11/20/89
Received : 11/20/89
Tested : 11/21/89 at: 1200
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	23:40	51:00	75:30	96:00	%
100	0	0	0	0	0	0
75	0	0	0	0	0	0
56	0	0	0	0	0	0
25	0	0	0	0	0	0
10	0	0	0	0	0	0
1	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

TOXICITY TEST PARAMETERS

Sample Number: 05890113

TEST CONC. %	ELAPSED TIME				
	00:00	23:40	51:00	75:30	96:00
100	pH 7.9	7.8	7.8	7.8	7.8
	O2 ppm 10.3	10.3	9.4	9.8	9.6
	Cond. 239				242
	Temp(C) 15.0	15.0	15.0	15.0	15.0
75	pH 7.7	7.8	7.8	7.8	7.8
	O2 ppm 10.2	10.4	9.6	9.9	10.0
	Cond. 222				222
	Temp(C) 15.0	15.0	15.0	15.0	15.0
56	pH 7.4	7.7	7.7	7.8	7.8
	O2 ppm 10.0	10.1	9.5	10.0	10.2
	Cond. 209				210
	Temp(C) 15.0	15.0	15.0	15.0	15.0
25	pH 7.2	7.7	7.7	7.8	7.8
	O2 ppm 9.9	10.0	9.5	9.9	10.0
	Cond. 191				189
	Temp(C) 15.0	15.0	15.0	15.0	15.0
10	pH 7.2	7.7	7.6	7.7	7.7
	O2 ppm 9.8	10.1	9.3	9.9	10.1
	Cond. 181				179
	Temp(C) 15.0	15.0	15.0	15.0	15.0
1	pH 7.2	7.7	7.7	7.8	7.8
	O2 ppm 9.8	10.2	9.9	10.2	10.3
	Cond. 178				174
	Temp(C) 15.0	15.0	15.0	15.0	15.0
Control	pH 7.2	7.5	7.7	7.7	7.7
	O2 ppm 9.7	10.4	9.8	10.2	10.2
	Cond. 170				171
	Temp(C) 15.0	15.0	15.0	15.0	15.0
Control	pH 7.1	7.6	7.9	7.8	7.7
	O2 ppm 9.9	10.3	9.8	10.4	10.4
	Cond. 171				170
	Temp(C) 15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 05890131

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (1100)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C. Ferguson
Date Collected : 12/18/89
Received : 12/18/89
Tested : 12/18/89 at: 1500
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	19:30	43:30	72:30	96:15	%
100	0	0	0	0	0	0
75	0	0	0	0	0	0
56	0	0	0	0	0	0
25	0	0	0	0	0	0
10	0	0	0	0	0	0
1	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890131

TEST CONC. %	ELAPSED TIME				
	00:00	19:30	43:30	72:30	96:15
100	pH 7.9	7.5	7.8	7.8	7.7
	O2 ppm 11.1	8.8	9.4	8.0	9.2
	Cond. 196				199
	Temp(C) 15.0	15.0	15.0	15.0	15.0
75	pH 7.9	7.4	7.9	7.8	7.8
	O2 ppm 10.9	8.9	8.9	8.4	9.5
	Cond. 190				192
	Temp(C) 15.0	15.0	15.0	15.0	15.0
56	pH 7.8	7.4	8.0	7.8	7.8
	O2 ppm 10.6	8.9	8.9	8.4	9.5
	Cond. 187				189
	Temp(C) 15.0	15.0	15.0	15.0	15.0
25	pH 7.8	7.5	7.5	7.8	7.8
	O2 ppm 10.2	9.0	9.8	9.4	9.5
	Cond. 181				185
	Temp(C) 15.0	15.0	15.0	15.0	15.0
10	pH 7.7	7.5	8.0	7.8	7.8
	O2 ppm 10.3	9.4	9.6	9.4	9.7
	Cond. 180				182
	Temp(C) 15.0	15.0	15.0	15.0	15.0
1	pH 7.7	7.5	7.9	7.8	7.8
	O2 ppm 10.4	9.5	9.6	9.6	9.7
	Cond. 177				182
	Temp(C) 15.0	15.0	15.0	15.0	15.0
Control	pH 7.7	7.6	7.8	7.6	7.8
	O2 ppm 10.5	10.0	9.3	9.2	9.8
	Cond. 170				176
	Temp(C) 15.0	15.0	15.0	15.0	15.0
Control	pH 7.7	7.6	7.8	7.7	7.8
	O2 ppm 10.4	9.9	9.4	9.4	9.6
	Cond. 170				176
	Temp(C) 15.0	15.0	15.0	15.0	15.0

MISA Trout

TOXICITY TEST REPORT

Sample: 05900012

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (1100)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : P. Tymstra
Date Collected : 01/15/90
Received : 01/15/90
Tested : 01/15/90 at: 1530
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
	%	00:00	20:10	42:10	66:00	97:10
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900012

TEST CONC. %		E L A P S E D T I M E				
		00:00	20:10	42:10	66:00	97:10
100	pH	7.9	7.7	7.6	7.6	7.5
	O2 ppm	10.8	9.0	8.5	9.0	9.0
	Cond.	229				241
	Temp(C)	15.0	15.0	15.0	15.0	15.0
100	pH	7.9	7.7	7.6	7.6	7.4
	O2 ppm	10.8	8.6	8.5	9.0	8.4
	Cond.	228				240
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.7	7.6	7.6	7.5	7.4
	O2 ppm	9.9	9.0	9.0	9.2	9.2
	Cond.	179				182
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.7	7.5	7.6	7.5	7.4
	O2 ppm	9.7	8.8	8.8	9.0	8.8
	Cond.	179				181
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 05900040

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (1100)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C. Ferguson
Date Collected : 02/19/90
Received : 02/19/90
Tested : 02/21/90 at: 1900
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
	%	00:00	16:00	44:50	63:30	96:00
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900040

TEST CONC.	ELAPSED TIME				
	%	00:00	16:00	44:50	63:30

100	pH	7.7				7.7
	O2 ppm	10.4				10.0
	Cond.	270				298
	Temp(C)	15.0				15.0
100	pH	7.7				7.7
	O2 ppm	10.6				10.1
	Cond.	260				278
	Temp(C)	15.0				15.0
Control	pH	7.5				7.4
	O2 ppm	10.4				10.2
	Cond.	170				188
	Temp(C)	15.0				15.0
Control	pH	7.6				7.4
	O2 ppm	10.3				10.2
	Cond.	169				188
	Temp(C)	15.0				15.0

MISA Trout

TOXICITY TEST REPORT

Sample: 05900059

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (1100)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C. Ferguson
Date Collected : 03/19/90
Received : 03/19/90
Tested : 03/21/90 at: 1330
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
	%	00:00	23:25	43:15	75:00	96:00
100	0	0	0	0	0	0
75	0	0	0	0	0	0
56	0	0	0	0	0	0
25	0	0	0	0	0	0
10	0	0	0	0	0	0
1	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900059

TEST CONC. %	ELAPSED TIME				
	00:00	23:25	43:15	75:00	96:00

100	pH	7.7	7.6
	O2 ppm	11.7	9.4
	Cond.	229	248
	Temp(C)	15.0	15.0
75	pH	7.6	7.5
	O2 ppm	11.6	9.4
	Cond.	219	232
	Temp(C)	15.0	15.0
56	pH	7.5	7.5
	O2 ppm	11.6	9.9
	Cond.	205	218
	Temp(C)	15.0	15.0
25	pH	7.4	7.5
	O2 ppm	11.5	9.9
	Cond.	171	199
	Temp(C)	15.0	15.0
10	pH	7.3	7.5
	O2 ppm	11.6	9.9
	Cond.	165	182
	Temp(C)	15.0	15.0
1	pH	7.3	7.5
	O2 ppm	11.6	9.9
	Cond.	162	180
	Temp(C)	15.0	15.0
Control	pH	7.5	7.7
	O2 ppm	12.1	9.8
	Cond.	166	189
	Temp(C)	15.0	15.0
Control	pH	7.6	7.8
	O2 ppm	11.7	9.8
	Cond.	168	182
	Temp(C)	15.0	15.0

TOXICITY TEST REPORT

Sample: 05890095

TEST CONDITIONS

Company : Polysar Limited
 Sarnia, ONT
 (30007)
 Region : Southwest
 Industry : Organic Chemical
 Control point : OT cooling water, (1400)
 Laboratory : Pollutech
 Sampling Method : Grab
 Sampled By : C. Ferguson
 Date Collected : 11/06/89
 Received : 11/06/89
 Tested : 11/07/89 at: 1800

Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY	
	%	00:00	22:00	40:30	64:00	96:00	%
100	0	0	0	0	0	0	0
75	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890095

TEST CONC. %		E L A P S E D T I M E				
		00:00	22:00	40:30	64:00	96:00
100	pH	7.8	7.5	7.9	7.8	7.8
	O2 ppm	10.2	10.1	9.8	9.5	9.5
	Cond.	172				167
	Temp(C)	15.0	15.0	15.0	15.0	15.0
75	pH	7.5	7.3	7.7	7.7	7.7
	O2 ppm	10.0	9.4	9.4	9.3	9.5
	Cond.	172				170
	Temp(C)	15.0	15.0	15.0	15.0	15.0
56	pH	7.3	7.3	7.7	7.7	7.7
	O2 ppm	10.0	9.4	9.3	9.3	9.4
	Cond.	170				170
	Temp(C)	15.0	15.0	15.0	15.0	15.0
25	pH	7.2	7.2	7.8	7.7	7.7
	O2 ppm	9.8	9.8	9.4	9.2	9.5
	Cond.	171				170
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.2	7.2	7.8	7.7	7.7
	O2 ppm	9.8	9.8	9.5	9.2	9.3
	Cond.	170				170
	Temp(C)	15.0	15.0	15.0	15.0	15.0
1	pH	7.2	7.3	7.7	7.7	7.7
	O2 ppm	9.9	9.9	9.7	9.8	9.8
	Cond.	172				172
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.2	7.4	7.7	7.8	7.7
	O2 ppm	10.0	9.8	10.2	9.8	10.3
	Cond.	167				170
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.2	7.4	7.7	7.7	7.7
	O2 ppm	10.0	10.2	9.8	9.6	9.8
	Cond.	169				170
	Temp(C)	15.0	15.0	15.0	15.0	15.0

MISA Trout

TOXICITY TEST REPORT

Sample: 05900022

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : OT cooling water, (1400)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C.Ferguson
Date Collected : 02/05/90
Received : 02/05/90
Tested : 02/07/90 at: 1630
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
%	00:00	24:10	45:00	68:10	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900022

TEST CONC. %		E L A P S E D T I M E				
		00:00	24:10	45:00	68:10	96:00
100	pH	7.7	7.6	7.6	7.7	7.7
	O2 ppm	10.0	0.6	9.5	9.6	9.4
	Cond.	165				172
	Temp(C)	15.0	15.0	15.0	15.0	15.0
100	pH	7.7	7.5	7.6	7.7	7.7
	O2 ppm	10.2	9.6	9.5	9.7	9.5
	Cond.	165				174
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.1	7.3	7.5	7.7	7.7
	O2 ppm	10.4	10.2	9.9	9.8	9.6
	Cond.	162				175
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.1	7.3	7.5	7.7	7.7
	O2 ppm	10.4	10.2	9.8	9.6	9.7
	Cond.	162				176
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 05890097

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : OT cooling water, (1600)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C. Ferguson
Date Collected : 11/06/89
Received : 11/06/89
Tested : 11/07/89 at: 1800
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY %
	%	00:00	22:00	40:30	64:00	96:00
100	0	0	0	0	0	0
75	0	0	0	0	0	0
56	0	0	0	0	0	0
25	0	0	0	0	0	0
10	0	0	0	0	0	0
1	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890097

TEST CONC. %	ELAPSED TIME				
		00:00	22:00	40:30	64:00 96:00
100	pH	8.0	7.6	7.8	7.7
	O2 ppm	10.4	9.4	9.5	9.2
	Cond.	175			169
	Temp(C)	15.0	15.0	15.0	15.0
75	pH	7.7	7.5	7.8	7.7
	O2 ppm	10.2	9.4	9.3	9.2
	Cond.	172			169
	Temp(C)	15.0	15.0	15.0	15.0
56	pH	7.4	7.4	7.7	7.6
	O2 ppm	10.2	9.2	9.2	9.0
	Cond.	171			170
	Temp(C)	15.0	15.0	15.0	15.0
25	pH	7.3	7.4	7.7	7.6
	O2 ppm	10.2	9.5	9.5	9.2
	Cond.	170			170
	Temp(C)	15.0	15.0	15.0	15.0
10	pH	7.3	7.4	7.7	7.7
	O2 ppm	10.0	9.4	9.6	9.4
	Cond.	170			170
	Temp(C)	15.0	15.0	15.0	15.0
1	pH	7.3	7.4	7.7	7.7
	O2 ppm	10.1	9.8	9.6	9.6
	Cond.	167			170
	Temp(C)	15.0	15.0	15.0	15.0
Control	pH	7.2	7.4	7.7	7.8
	O2 ppm	10.0	9.8	9.8	9.8
	Cond.	167			170
	Temp(C)	15.0	15.0	15.0	15.0
Control	pH	7.2	7.4	7.7	7.7
	O2 ppm	10.0	10.2	9.8	9.6
	Cond.	169			170
	Temp(C)	15.0	15.0	15.0	15.0

MISA Trout

TOXICITY TEST REPORT

Sample: 05900024

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : OT cooling water, (1600)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C.Ferguson
Date Collected : 02/05/90
Received : 02/05/90
Tested : 02/07/90 at: 1630
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY	
	%	00:00	24:10	45:00	68:10	96:00	%
100	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900024

TEST CONC.	%	E L A P S E D T I M E				
		00:00	24:10	45:00	68:10	96:00
100	pH	7.8	7.6	7.6	7.8	7.8
	O2 ppm	7.8	9.5	9.5	9.4	9.6
	Cond.	182				190
	Temp(C)	15.0	15.0	15.0	15.0	15.0
100	pH	7.9	7.6	7.6	7.8	7.8
	O2 ppm	7.8	9.4	9.7	9.5	9.7
	Cond.	181				192
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.1	7.3	7.5	7.7	7.7
	O2 ppm	10.4	9.9	9.9	9.8	9.6
	Cond.	162				175
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.1	7.3	7.5	7.7	7.7
	O2 ppm	10.1	10.2	9.8	9.6	9.7
	Cond.	162				176
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 05890091

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : Batch, (1700)
Laboratory : Pollutech
Sampling Method : grab
Sampled By : C. Ferguson
Date Collected : 10/30/89
Received : 10/30/89
Tested : 10/31/89 at: 1400
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	19:00	44:00	68:00	96:30	%
100	0	0	0	0	0	0
75	0	0	0	0	0	0
56	0	0	0	0	0	0
25	0	0	0	0	0	0
10	0	0	0	0	0	0
1	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 05890091

TEST CONC. %		ELAPSED TIME				
		00:00	19:00	44:00	68:00	96:30
100	pH	7.3	7.8	8.0	8.0	8.1
	O2 ppm	7.7	6.7	7.8	7.6	7.2
	Cond.	3190				3070
	Temp(C)	15.0	15.0	15.0	15.0	15.0
75	pH	7.2	7.6	7.8	7.9	7.9
	O2 ppm	8.0	5.5	6.0	7.0	6.4
	Cond.	2500				2450
	Temp(C)	15.0	15.0	15.0	15.0	15.0
56	pH	7.1	7.6	7.8	7.9	7.9
	O2 ppm	8.3	6.3	6.2	7.0	7.2
	Cond.	1890				1900
	Temp(C)	15.0	15.0	15.0	15.0	15.0
25	pH	7.0	7.5	7.6	7.5	7.6
	O2 ppm	8.5	6.6	6.8	5.8	6.2
	Cond.	990				1000
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.0	7.5	7.5	7.6	7.6
	O2 ppm	8.5	8.0	8.0	7.9	8.1
	Cond.	510				510
	Temp(C)	15.0	15.0	15.0	15.0	15.0
1	pH	7.0	7.3	7.5	7.5	7.6
	O2 ppm	8.4	7.3	8.6	8.7	8.2
	Cond.	200				215
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.0	7.2	7.4	7.5	7.5
	O2 ppm	8.5	7.4	8.4	8.7	8.4
	Cond.	170				180
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.0	7.3	7.4	7.4	7.5
	O2 ppm	8.6	8.4	8.3	7.9	8.4
	Cond.	170				181
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 05890115

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : Batch, (1700)
Laboratory : Pollutech
Sampling Method : grab
Sampled By : C. Ferguson
Date Collected : 11/20/89
Received : 11/20/89
Tested : 11/21/89 at: 1200
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
%	00:00	23:40	51:00	76:00	96:00	%
100	0	0	0	0	0	0
75	0	0	0	0	0	0
56	0	0	0	0	0	0
25	0	0	0	0	0	0
10	0	0	0	0	0	0
1	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

TOXICITY TEST PARAMETERS

Sample Number: 05890115

TEST CONC. %		ELAPSED TIME				
		00:00	23:40	51:00	76:00	96:00
100	pH	6.8	7.9	8.0	8.0	8.0
	O2 ppm	8.4	10.2	9.5	10.1	10.2
	Cond.	3610				3550
	Temp(C)	15.0	15.0	15.0	15.0	15.0
75	pH	6.9	7.8	7.9	7.9	8.0
	O2 ppm	8.9	10.2	9.7	10.2	10.3
	Cond.	2880				2800
	Temp(C)	15.0	15.0	15.0	15.0	15.0
56	pH	7.1	7.9	7.9	7.9	7.4
	O2 ppm	9.2	10.5	9.5	10.2	10.3
	Cond.	2100				2110
	Temp(C)	15.0	15.0	15.0	15.0	15.0
25	pH	7.2	7.8	7.8	7.8	7.9
	O2 ppm	9.5	10.2	9.7	10.2	10.2
	Cond.	1130				1120
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.2	7.7	7.8	7.8	7.8
	O2 ppm	9.6	10.1	9.7	10.1	10.0
	Cond.	700				700
	Temp(C)	15.0	15.0	15.0	15.0	15.0
1	pH	7.2	7.7	7.7	7.7	7.7
	O2 ppm	9.8	10.4	9.6	10.1	9.9
	Cond.	209				210
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.2	7.5	7.7	7.7	7.7
	O2 ppm	9.7	10.4	9.8	10.2	10.2
	Cond.	170				171
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.1	7.6	7.9	7.8	7.7
	O2 ppm	9.9	10.3	9.8	10.4	10.4
	Cond.	171				170
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 05890134

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : Batch, (1700)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C.Ferguson
Date Collected : 12/18/89
Received : 12/18/89
Tested : 12/19/89 at: 1015
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
%	00:00	24:15	52:15	71:15	96:25	%
100	0	0	0	0	0	0
75	0	0	0	0	0	0
56	0	0	0	0	0	0
25	0	0	0	0	0	0
10	0	0	0	0	0	0
1	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0
96 Hour LC50	: Non-lethal					
95% fid. limits	: 0.0 - 0.0 %					
Comments	:					

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890134

TEST CONC. %	E L A P S E D T I M E				
	00:00	24:15	52:15	71:15	96:25
100	pH 6.8	7.8	7.8	7.9	8.0
	O2 ppm 8.0	8.8	9.2	9.5	9.3
	Cond. 3810				3880
	Temp(C) 15.0	15.0	15.0	15.0	15.0
75	pH 6.9	7.9	7.9	7.8	8.0
	O2 ppm 8.9	9.0	9.7	9.6	9.4
	Cond. 2930				2960
	Temp(C) 15.0	15.0	15.0	15.0	15.0
56	pH 7.0	7.9	7.9	7.9	7.9
	O2 ppm 9.2	9.4	9.6	9.6	9.3
	Cond. 2250				2280
	Temp(C) 15.0	15.0	15.0	15.0	15.0
25	pH 7.2	7.9	7.9	7.9	7.9
	O2 ppm 10.2	9.5	9.5	9.7	9.3
	Cond. 1190				1230
	Temp(C) 15.0	15.0	15.0	15.0	15.0
10	pH 7.4	7.8	7.8	7.9	7.8
	O2 ppm 10.0	9.4	9.3	9.9	9.6
	Cond. 510				530
	Temp(C) 15.0	15.0	15.0	15.0	15.0
1	pH 7.4	7.8	7.8	8.0	7.8
	O2 ppm 9.8	9.7	9.6	9.7	9.5
	Cond. 201				210
	Temp(C) 15.0	15.0	15.0	15.0	15.0
Control	pH 7.4	7.9	7.8	7.8	7.8
	O2 ppm 10.2	9.8	9.6	9.7	9.7
	Cond. 168				172
	Temp(C) 15.0	15.0	15.0	15.0	15.0
Control	pH 7.4	7.9	7.7	7.7	7.7
	O2 ppm 10.0	9.0	8.5	9.0	9.6
	Cond. 168				172
	Temp(C) 15.0	15.0	15.0	15.0	15.0

MISA Trout

TOXICITY TEST REPORT

Sample: 05900017

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)

Region : Southwest

Industry : Organic Chemical

Control point : Batch, (1700)

Laboratory : Pollutech

Sampling Method : Grab

Sampled By : P.Tymstra

Date Collected : 01/15/90

Received : 01/15/90

Tested : 01/16/90 at: 1200

Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout

Weight(gm) :

Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY	
	%	00:00	21:00	45:30	76:00		96:00
100	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900017

TEST CONC. %	E L A P S E D T I M E				
	00:00	21:00	45:30	76:00	96:00

100	pH	9.0	8.6	8.5	8.3	8.0
	O2 ppm	8.7	8.2	8.9	9.0	9.2
	Cond.	4010				3920
	Temp(C)	15.0	15.0	15.0	15.0	15.0
100	pH	9.0	8.6	8.6	8.3	8.0
	O2 ppm	8.5	8.2	9.0	9.0	8.9
	Cond.	4190				3900
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.7	7.6	7.6	7.5	7.4
	O2 ppm	10.0	8.7	9.0	9.4	9.2
	Cond.	181				181
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.7	7.5	7.5	7.5	7.4
	O2 ppm	10.0	8.5	8.7	9.2	9.6
	Cond.	180				182
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 05900041

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : Batch, (1700)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C.Ferguson
Date Collected : 02/19/90
Received : 02/19/90
Tested : 02/21/90 at: 1900
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	16:00	44:50	63:30	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900041

TEST CONC. %	ELAPSED TIME				
	00:00	16:00	44:50	63:30	96:00
100	pH	7.2		8.0	
	O2 ppm	8.0		10.1	
	Cond.	4080		4090	
	Temp(C)	15.0		15.0	
100	pH	7.1		7.9	
	O2 ppm	8.2		9.6	
	Cond.	1060		4090	
	Temp(C)	15.0		15.0	
Control	pH	7.5		7.4	
	O2 ppm	10.4		10.2	
	Cond.	170		188	
	Temp(C)	15.0		15.0	
Control	pH	7.6		7.4	
	O2 ppm	10.3		10.2	
	Cond.	169		188	
	Temp(C)	15.0		15.0	

MISA Trout

TOXICITY TEST REPORT

Sample: 05900061

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : Batch, (1700)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C. Ferguson
Date Collected : 03/19/90
Received : 03/19/90
Tested : 03/21/90 at: 1330
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	23:25	43:15	75:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal
95% fid. Limits : 0.0 - 0.0 %
Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900061

TEST CONC. %	ELAPSED TIME				
	00:00	23:25	43:15	75:00	96:00
100	pH	8.0			8.5
	O2 ppm	10.0			9.8
	Cond.	4190			4180
	Temp(C)	15.0			15.0
100	pH	8.0			8.4
	O2 ppm	10.2			9.7
	Cond.	4190			4160
	Temp(C)	15.0			15.0
Control	pH	7.5			7.7
	O2 ppm	12.1			9.8
	Cond.	166			189
	Temp(C)	15.0			15.0
Control	pH	7.6			7.8
	O2 ppm	11.7			9.8
	Cond.	168			182
	Temp(C)	15.0			15.0

TOXICITY TEST REPORT

Sample: 05890086

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)

Region : Southwest

Industry : Organic Chemical

Control point : process effluent, (1800)

Laboratory : Pollutech

Sampling Method : Grab

Sampled By : C. Ferguson

Date Collected : 10/16/89

Received : 10/16/89

Tested : 10/17/89 at: 1135

Type of Bioassay : STATIC
(Protocol to determine the acute lethality of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout

Weight(gm) :

Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY %
	%	00:00	22:05	47:05	70:05	97:05
100	0	0	0	0	0	0
75	0	0	0	0	0	0
56	0	0	0	0	0	0
25	0	0	0	0	0	0
10	0	0	0	0	0	0
1	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890086

TEST ELAPSED TIME

CONC. % 00:00 22:05 47:05 70:05 97:05

100	pH	6.5	7.4	7.4	7.5	7.4
	O2 ppm	7.6	8.6	8.5	9.1	9.5
	Cond.	1890				1720
	Temp(C)	15.0	15.0	15.0	15.0	15.0
75	pH	6.6	7.3	7.4	7.4	7.3
	O2 ppm	8.4	8.4	8.5	9.1	9.5
	Cond.	1450				1390
	Temp(C)	15.0	15.0	15.0	15.0	15.0
56	pH	6.7	7.4	7.4	7.4	7.4
	O2 ppm	8.4	8.8	8.8	9.3	9.4
	Cond.	1100				1080
	Temp(C)	15.0	15.0	15.0	15.0	15.0
25	pH	6.8	7.3	7.4	7.4	7.4
	O2 ppm	8.4	8.3	8.4	8.8	9.4
	Cond.	590				600
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	6.9	7.1	7.4	7.4	7.3
	O2 ppm	8.3	7.2	8.8	8.9	9.4
	Cond.	360				362
	Temp(C)	15.0	15.0	15.0	15.0	15.0
1	pH	7.0	7.3	7.4	7.4	7.4
	O2 ppm	8.4	8.5	8.5	8.7	9.2
	Cond.	185				191
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	6.9	7.3	7.3	7.4	7.4
	O2 ppm	8.6	8.2	8.1	8.5	8.9
	Cond.	167				172
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	6.9	7.1	7.2	7.2	7.4
	O2 ppm	8.8	7.7	8.2	8.5	9.0
	Cond.	170				174
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 05890112

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : process effluent, (1800)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C. Ferguson
Date Collected : 11/20/89
Received : 11/20/89
Tested : 11/21/89 at: 1200
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	23:40	51:00	76:30	96:00	%
100	0	0	0	0	0	0
75	0	0	0	0	0	0
56	0	0	0	0	0	0
25	0	0	0	0	0	0
10	0	0	0	0	0	0
1	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890112

TEST CONC. %	ELAPSED TIME				
	00:00	23:40	51:00	76:30	96:00

100	pH	7.0	7.8	8.0	8.2	8.1
	O2 ppm	8.2	10.1	9.6	10.0	10.1
	Cond.	2170				2100
	Temp(C)	15.0	15.0	15.0	15.0	15.0
75	pH	7.0	7.9	7.9	8.2	8.1
	O2 ppm	8.6	9.9	9.6	10.1	9.9
	Cond.	1720				1650
	Temp(C)	15.0	15.0	15.0	15.0	15.0
56	pH	7.1	7.9	7.9	8.1	8.0
	O2 ppm	9.0	10.0	9.6	10.0	10.0
	Cond.	1310				1300
	Temp(C)	15.0	15.0	15.0	15.0	15.0
25	pH	7.1	7.8	7.8	8.1	8.0
	O2 ppm	9.4	9.9	9.5	9.9	9.9
	Cond.	650				710
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.1	7.7	7.6	7.9	7.8
	O2 ppm	9.8	9.9	9.4	9.5	9.7
	Cond.	411				405
	Temp(C)	15.0	15.0	15.0	15.0	15.0
1	pH	7.1	7.7	7.6	7.8	7.7
	O2 ppm	10.0	9.8	9.4	10.1	10.2
	Cond.	195				192
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.2	7.5	7.7	7.7	7.7
	O2 ppm	9.7	10.4	9.8	10.2	10.2
	Cond.	170				170
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.1	7.6	7.9	7.8	7.7
	O2 ppm	9.9	10.3	9.8	10.4	10.4
	Cond.	171				171
	Temp(C)	15.0	15.0	15.0	15.0	15.0

TOXICITY TEST REPORT

Sample: 05890133

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : process effluent, (1800)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C. Ferguson
Date Collected : 12/18/89
Received : 12/18/89
Tested : 12/18/89 at: 1500
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	19:30	43:30	72:30	96:00	%
100	0	0	0	0	0	0
75	0	0	0	0	0	0
56	0	0	0	0	0	0
25	0	0	0	0	0	0
10	0	0	0	0	0	0
1	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0
96 Hour LC50	: Non-lethal					
95% fid. limits	: 0.0 - 0.0 %					
Comments	:					

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890133

TEST CONC.	%	ELAPSED TIME				
		00:00	19:30	43:30	72:30	96:00
100	pH	6.7	7.5	7.9	7.8	7.9
	O2 ppm	8.2	8.2	9.2	8.1	9.4
	Cond.	2080				2120
	Temp(C)	15.0	15.0	15.0	15.0	15.0
75	pH	6.9	7.6	8.0	7.9	8.0
	O2 ppm	8.8	8.7	9.8	9.4	9.5
	Cond.	1600				1650
	Temp(C)	15.0	15.0	15.0	15.0	15.0
56	pH	7.0	7.6	8.0	7.8	7.8
	O2 ppm	9.1	9.6	9.6	9.6	9.3
	Cond.	1305				1310
	Temp(C)	15.0	15.0	15.0	15.0	15.0
25	pH	7.3	7.6	8.0	7.8	7.8
	O2 ppm	9.8	8.8	9.6	9.2	9.3
	Cond.	710				780
	Temp(C)	15.0	15.0	15.0	15.0	15.0
10	pH	7.5	7.6	8.0	7.7	7.8
	O2 ppm	10.2	9.0	9.4	9.2	9.2
	Cond.	408				418
	Temp(C)	15.0	15.0	15.0	15.0	15.0
1	pH	7.8	7.6	7.9	7.8	7.8
	O2 ppm	10.4	9.6	9.3	9.2	9.4
	Cond.	195				205
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.7	7.6	7.8	7.6	7.8
	O2 ppm	10.5	10.0	9.3	9.2	9.8
	Cond.	170				176
	Temp(C)	15.0	15.0	15.0	15.0	15.0
Control	pH	7.7	7.6	7.8	7.7	7.8
	O2 ppm	10.4	9.9	9.4	9.4	9.6
	Cond.	170				176
	Temp(C)	15.0	15.0	15.0	15.0	15.0

MISA Trout

TOXICITY TEST REPORT

Sample: 05900013

TEST CONDITIONS

Company : Polysar Limited
 : Sarnia, ONT
 : (30007)
 Region : Southwest
 Industry : Organic Chemical

 Control point : process effluent, (1800)

 Laboratory : Pollutech
 Sampling Method : Grab
 Sampled By : P.Tymstra
 Date Collected : 01/15/90
 Received : 01/15/90
 Tested : 01/16/90 at: 1200

 Type of Bioassay : STATIC
 : (Protocol to determine the acute lethality
 : of liquid effluents to fish. OME, 1983).

 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
	%	00:00	21:00	45:30	76:00 96:00	
100	0	0	0	0	0	0
75	0	0	0	0	0	0
56	0	0	0	0	0	0
25	0	0	0	0	0	0
10	0	0	0	0	0	0
1	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

 SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900013

TEST CONC. %	ELAPSED TIME				
	00:00	21:00	45:30	76:00	96:00

100	pH	7.0		7.9
	O2 ppm	8.3		9.5
	Cond.	1870		1780
	Temp(C)	15.0		15.0
75	pH	7.1		7.7
	O2 ppm	8.8		9.5
	Cond.	1480		1410
	Temp(C)	15.0		15.0
56	pH	7.2		7.7
	O2 ppm	9.2		9.5
	Cond.	1120		1110
	Temp(C)	15.0		15.0
25	pH	7.3		7.5
	O2 ppm	9.8		9.6
	Cond.	650		650
	Temp(C)	15.0		15.0
10	pH	7.5		7.5
	O2 ppm	9.9		9.6
	Cond.	350		338
	Temp(C)	15.0		15.0
1	pH	7.7		7.5
	O2 ppm	10.1		9.4
	Cond.	193		196
	Temp(C)	15.0		15.0
Control	pH	7.7		7.4
	O2 ppm	10.0		9.2
	Cond.	181		181
	Temp(C)	15.0		15.0
Control	pH	7.7		7.4
	O2 ppm	10.0		9.6
	Cond.	180		181
	Temp(C)	15.0		15.0

TOXICITY TEST REPORT

Sample: 05900039

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : process effluent, (1800)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C. Ferguson
Date Collected : 02/19/90
Received : 02/19/90
Tested : 02/21/90 at: 1900
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY	
	%	00:00	16:00	44:50	63:30	96:00	%
100	0	0	0	0	0	0	0
75	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900039

TEST CONC.	ELAPSED TIME				
	%	00:00	16:00	44:50	63:30

100	pH	7.2			7.9
	O2 ppm	8.9			9.5
	Cond.	2130			1780
	Temp(C)	15.0			15.0
75	pH	7.3			7.7
	O2 ppm	9.2			9.5
	Cond.	1690			1410
	Temp(C)	15.0			15.0
56	pH	7.3			7.7
	O2 ppm	9.6			9.5
	Cond.	880			1110
	Temp(C)	15.0			15.0
25	pH	7.4			7.5
	O2 ppm	9.9			9.6
	Cond.	760			650
	Temp(C)	15.0			15.0
10	pH	7.5			7.5
	O2 ppm	10.2			9.6
	Cond.	382			338
	Temp(C)	15.0			15.0
1	pH	7.5			7.5
	O2 ppm	10.0			9.4
	Cond.	191			196
	Temp(C)	15.0			15.0
Control	pH	7.5			7.4
	O2 ppm	10.4			9.2
	Cond.	170			181
	Temp(C)	15.0			15.0
Control	pH	7.6			7.4
	O2 ppm	10.3			9.6
	Cond.	169			181
	Temp(C)	15.0			15.0

MISA Trout

TOXICITY TEST REPORT

Sample: 05900058

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : process effluent, (1800)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C.Ferguson
Date Collected : 03/19/90
Received : 03/19/90
Tested : 03/20/90 at: 1330
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	23:25	43:15	75:00	96:00	%
100	0	0	0	0	0	0
75	0	0	0	0	0	0
56	0	0	0	0	0	0
25	0	0	0	0	0	0
10	0	0	0	0	0	0
1	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal.

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900058

TEST CONC. %	ELAPSED TIME
	00:00 23:25 43:15 75:00 96:00

100	pH	7.0	7.7
	O2 ppm	9.2	9.7
	Cond.	1700	1710
	Temp(C)	15.0	15.0
75	pH	7.1	7.7
	O2 ppm	9.7	9.6
	Cond.	1380	1390
	Temp(C)	15.0	15.0
56	pH	7.3	7.6
	O2 ppm	10.4	9.6
	Cond.	1110	1090
	Temp(C)	15.0	15.0
25	pH	7.4	7.6
	O2 ppm	11.0	9.8
	Cond.	610	650
	Temp(C)	15.0	15.0
10	pH	7.5	7.5
	O2 ppm	11.3	9.6
	Cond.	329	342
	Temp(C)	15.0	15.0
1	pH	7.5	7.4
	O2 ppm	11.4	8.8
	Cond.	180	220
	Temp(C)	15.0	15.0
Control	pH	7.5	7.7
	O2 ppm	12.1	9.8
	Cond.	166	189
	Temp(C)	15.0	15.0
Control	pH	7.6	7.8
	O2 ppm	11.7	9.8
	Cond.	168	182
	Temp(C)	15.0	15.0

COMPANY: Polysar Limited, 'Sarnia
(30007)
SECTOR: Organic Chemical
REGION: Southwest

SUMMARY

Data for forty *Daphnia magna* acute lethality toxicity tests conducted on samples of effluent collected between October 1989 and March 1990 were submitted by Polysar Limited of Sarnia. The samples generally had little or no acute toxicity to *Daphnia* for all eight outfalls being examined. The exceptions were three samples of combined effluent from outfalls #200, 500 and 1100 collected in February or March. These samples were acutely toxic to *Daphnia* with LC50s ranging from 2.6 to 59.7%.

The four samples from once through cooling water outfalls #1400 and 1600 were not acutely lethal to *Daphnia*.

The six samples from Batch effluent #1700 were not acutely lethal to *Daphnia*. Three of six samples of process effluent #1800 were nonlethal, and three samples had only one or two neonates die during the duration of the test.

Four samples from combined effluent #200 were not acutely lethal to *Daphnia*, and one sample had a 48 h LC50 > 100%. One sample collected in March was very toxic to *Daphnia* with an 48 h LC50 = 2.6%. Similarly, three samples from combined effluent #1100 were nonlethal, two samples had LC50s > 100% and the March sample was acutely toxic to *Daphnia* with an LC50 = 59.7%. Four samples from combined effluent #500 were nonlethal, and one sample had an LC50 > 100%. The toxic sample in this case was collected in February and had a 48 h LC50 = 6%. There was no change in pH, or conductivity in any of the toxic samples to give a clue as to the cause of their toxicity. Such deviations from the normal effluent quality may have been caused by a system failure, or by routine pipe cleaning maintenance. Five samples from combined effluent #400 were nonlethal and one sample had two mortalities in the 100% effluent only.

combined effluent

05890083 sampled: 10/09/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05890096 sampled: 11/06/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05890122 sampled: 12/04/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

Polysar Limited (continued)

05900001 sampled: 01/01/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Control Mortality <10%

05900023 sampled: 02/05/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900049 sampled: 03/05/90 LC50: 2.6 %
95% fid. limits: 1.9 - 3.5 %
comments:

process effluent

combined effluent

05890081 sampled: 10/09/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05890103 sampled: 11/13/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05890123 sampled: 12/11/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

05900016 sampled: 01/08/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Duplicate also tested

05900029 sampled: 02/12/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900068 sampled: 03/26/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

combined effluent

05890085 sampled: 10/16/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

05890114 sampled: 11/20/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

Polysar Limited (continued)

05890132 sampled: 12/18/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900014 sampled: 01/15/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900038 sampled: 02/19/90 LC50: 0.0 - 6.0 %
95% fid. limits: 0.0 - 0.0 %
comments:

05900060 sampled: 03/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

emergency overflow

process effluent

process effluent

process effluent

combined effluent

05890087 sampled: 10/16/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05890113 sampled: 11/20/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05890131 sampled: 12/18/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

05900012 sampled: 01/15/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900040 sampled: 02/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900059 sampled: 03/19/90 LC50: 59.7 %
95% fid. limits: 50.5 - 70.7 %
comments:

Polysar Limited (continued)

emergency overflow

storm water

OT cooling water

05890095 sampled: 11/06/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900022 sampled: 02/05/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

storm water

OT cooling water

05890097 sampled: 11/06/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

05900024 sampled: 02/05/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

Batch

05890091 sampled: 10/30/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05890115 sampled: 11/20/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05890134 sampled: 12/18/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900017 sampled: 01/15/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900041 sampled: 02/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900061 sampled: 03/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

Polysar Limited (continued)

process effluent

05890086 sampled: 10/16/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

05890112 sampled: 11/20/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

05890133 sampled: 12/18/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

05900013 sampled: 01/15/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Duplicate Tested

05900039 sampled: 02/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

05900058 sampled: 03/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

process effluent

storm water

storm water

storm water

rain gauge

intake water

TOXICITY TEST REPORT

Sample: 05890083

TEST CONDITIONS

Company : Polysar Limited
 Sarnia, ONT
 (30007)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (200)
 Laboratory : Pollutech
 Sampling Method : Grab
 Sampled By : T. Moran
 Date Collected : 10/09/89
 Received : 10/09/89
 Tested : 10/10/89 at: 1500
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00 48:20		%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

 SLOPE of Mortality Curve :
 LC50 Calculated By :
TOXICITY TEST PARAMETERS

Sample Number: 05890083

TEST CONC. %	ELAPSED TIME	
	00:00 48:20	

100	pH	7.9	7.8
	O2 ppm	9.6	9.0
	Cond.	188	200
	Temp(C)	20.0	20.0
50	pH	8.0	8.0
	O2 ppm	9.2	8.9
	Cond.	362	390
	Temp(C)	20.0	20.0
26	pH	8.1	8.0
	O2 ppm	9.2	8.2
	Cond.	440	460
	Temp(C)	20.0	20.0
13	pH	8.1	8.0
	O2 ppm	9.2	9.0
	Cond.	480	495
	Temp(C)	20.0	20.0
6	pH	8.0	8.0
	O2 ppm	9.2	9.0
	Cond.	482	500
	Temp(C)	20.0	20.0
Control	pH	8.0	8.0
	O2 ppm	9.6	9.4
	Cond.	500	505
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05890096

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (200)
Laboratory : Pollutech
Sampling Method : grab
Sampled By : C. Ferguson
Date Collected : 11/06/89
Received : 11/06/89
Tested : 11/08/89 at: 1150
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E		TOTAL MORTALITY
%	00:00 48:35		%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments :

TOXICITY TEST PARAMETERS

Sample Number: 05890096

TEST CONC. %	E L A P S E D T I M E	
	00:00 48:35	

100	pH	7.7	8.0
	O2 ppm	9.2	8.5
	Cond.	198	201
	Temp(C)	20.0	20.0
50	pH	7.9	8.1
	O2 ppm	9.1	8.6
	Cond.	349	349
	Temp(C)	20.0	20.0
26	pH	8.0	8.2
	O2 ppm	9.2	8.7
	Cond.	420	411
	Temp(C)	20.0	20.0
13	pH	8.1	8.2
	O2 ppm	9.3	8.7
	Cond.	452	445
	Temp(C)	20.0	20.0
6	pH	8.1	8.2
	O2 ppm	9.3	8.9
	Cond.	470	471
	Temp(C)	20.0	20.0
Control	pH	8.0	8.1
	O2 ppm	9.4	9.3
	Cond.	465	463
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05890122

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (200)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : P. Tymstra
Date Collected : 12/04/89
Received : 12/04/89
Tested : 12/07/89 at: 1000
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00	48:00	%
100	0	1	8
50	0	2	16
26	0	0	0
13	0	1	8
6	0	0	0
Control	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890122

TEST CONC. %	ELAPSED TIME	
	00:00	48:00

100	pH	7.7	7.9
	O2 ppm	8.8	9.2
	Cond.	202	210
	Temp(C)	20.0	20.0
50	pH	8.0	8.1
	O2 ppm	8.8	8.9
	Cond.	349	350
	Temp(C)	20.0	20.0
26	pH	8.0	8.1
	O2 ppm	8.8	9.0
	Cond.	418	418
	Temp(C)	20.0	20.0
13	pH	8.1	8.1
	O2 ppm	9.0	9.2
	Cond.	452	452
	Temp(C)	20.0	20.0
6	pH	8.1	8.1
	O2 ppm	9.2	9.2
	Cond.	482	480
	Temp(C)	20.0	20.0
Control	pH	8.2	8.1
	O2 ppm	9.2	9.2
	Cond.	490	495
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05900001

TEST CONDITIONS

Company : Polysar Limited
 : Sarnia, ONT
 : (30007)
 Region : Southwest
 Industry : Organic Chemical

 Control point : combined effluent, (200)

 Laboratory : Pollutech
 Sampling Method : Grab
 Sampled By : T. Moran
 Date Collected : 01/01/90
 Received : 01/01/90
 Tested : 01/02/90 at: 1215

 Type of Bioassay : STATIC
 : (Daphnia magna Acute Lethality Toxicity
 : Test Protocol. OME, 1988)

 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00	48:00	%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	1	8

48 Hour LC50 : Non-lethal
 95% fid. limits : 0.0 - 0.0 %
 Comments : Control Mortality <10%

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900001

TEST CONC.	ELAPSED TIME	
%	00:00	48:00

100	pH	7.8	8.0
	O2 ppm	9.8	9.4
	Cond.	208	223
	Temp(C)	20.0	20.0
50	pH	8.3	8.1
	O2 ppm	9.6	9.3
	Cond.	352	360
	Temp(C)	20.0	20.0
26	pH	8.4	8.2
	O2 ppm	9.5	9.3
	Cond.	420	424
	Temp(C)	20.0	20.0
13	pH	8.4	8.3
	O2 ppm	9.6	9.3
	Cond.	450	455
	Temp(C)	20.0	20.0
6	pH	8.4	8.3
	O2 ppm	9.4	9.2
	Cond.	469	470
	Temp(C)	20.0	20.0
Control	pH	8.3	8.1
	O2 ppm	9.3	9.2
	Cond.	480	480
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05900023

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (200)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C.Ferguson
Date Collected : 02/05/90
Received : 02/05/90
Tested : 02/05/90 at: 1550
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00 48:50		%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900023

TEST CONC. %	ELAPSED TIME	
	00:00 48:50	

100	pH	7.9	7.8
	O2 ppm	10.1	9.0
	Cond.	200	210
	Temp(C)	20.0	20.0
50	pH	8.1	8.0
	O2 ppm	9.2	8.8
	Cond.	358	360
	Temp(C)	20.0	20.0
26	pH	8.2	8.1
	O2 ppm	9.1	8.8
	Cond.	430	428
	Temp(C)	20.0	20.0
13	pH	8.2	8.1
	O2 ppm	9.1	8.7
	Cond.	466	460
	Temp(C)	20.0	20.0
6	pH	8.2	8.1
	O2 ppm	9.2	8.8
	Cond.	484	480
	Temp(C)	20.0	20.0
Control	pH	8.2	8.1
	O2 ppm	9.4	8.9
	Cond.	500	500
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05900049

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (200)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C. Ferguson
Date Collected : 03/05/90
Received : 03/05/90
Tested : 03/05/90 at: 1450
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00	48:00	%
100	0	12	100
50	0	12	100
26	0	12	100
13	0	12	100
6	0	12	100
2	0	4	33
1	0	0	0
1	0	0	0
Control	0	0	0

48 Hour LC50 : 2.6 %

95% fid. limits : 1.9 - 3.5 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : Spearman-Kärber

TOXICITY TEST PARAMETERS

Sample Number: 05900049

TEST CONC. % ELAPSED TIME
00:00 48:00

100	pH	8.2	8.2
	O2 ppm	7.8	9.0
	Cond.	212	224
	Temp(C)	20.0	20.0
50	pH	8.3	8.4
	O2 ppm	8.4	9.0
	Cond.	360	374
	Temp(C)	20.0	20.0
26	pH	8.4	8.4
	O2 ppm	8.6	9.0
	Cond.	428	436
	Temp(C)	20.0	20.0
13	pH	8.4	8.4
	O2 ppm	8.7	9.1
	Cond.	460	478
	Temp(C)	20.0	20.0
6	pH	8.4	8.4
	O2 ppm	8.8	9.2
	Cond.	480	490
	Temp(C)	20.0	20.0
2	pH	8.3	8.5
	O2 ppm	8.6	9.1
	Cond.	510	470
	Temp(C)	20.0	20.0
1	pH	8.3	8.5
	O2 ppm	8.8	9.2
	Cond.	510	480
	Temp(C)	20.0	20.0
0	pH	8.3	8.5
	O2 ppm	9.0	9.2
	Cond.	498	480
	Temp(C)	20.0	20.0
Control	pH	8.3	8.5
	O2 ppm	9.2	9.4
	Cond.	510	480
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05890081

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (400)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : T. Moran
Date Collected : 10/09/89
Received : 10/09/89
Tested : 10/10/89 at: 1415
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00	48:00	%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890081

TEST CONC.	ELAPSED TIME	
%	00:00	48:00

100	pH	7.8	7.8
	O2 ppm	9.5	9.0
	Cond.	234	258
	Temp(C)	20.0	20.0
50	pH	7.9	7.9
	O2 ppm	9.4	8.9
	Cond.	380	400
	Temp(C)	20.0	20.0
26	pH	8.0	8.0
	O2 ppm	9.3	9.0
	Cond.	440	462
	Temp(C)	20.0	20.0
13	pH	8.0	8.0
	O2 ppm	9.4	9.4
	Cond.	470	490
	Temp(C)	20.0	20.0
6	pH	8.0	8.0
	O2 ppm	9.4	9.2
	Cond.	498	502
	Temp(C)	20.0	20.0
Control	pH	8.0	7.9
	O2 ppm	9.6	9.3
	Cond.	500	510
	Temp(C)	20.0	20.0

MISA Daphnia

TOXICITY TEST REPORT

Sample: 05890103

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (400)
Laboratory : Pollutech
Sampling Method : grab
Sampled By : C. Ferguson
Date Collected : 11/13/89
Received : 11/13/89
Tested : 11/13/89 at: 1145
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00 49:25		%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 05890103

TEST CONC. %	ELAPSED TIME
	00:00 49:25

100	pH	7.8	7.8
	O2 ppm	9.8	8.8
	Cond.	212	232
	Temp(C)	20.0	20.0
50	pH	8.0	7.9
	O2 ppm	9.6	8.9
	Cond.	350	370
	Temp(C)	20.0	20.0
26	pH	8.0	8.0
	O2 ppm	9.6	8.9
	Cond.	418	440
	Temp(C)	20.0	20.0
13	pH	8.1	8.0
	O2 ppm	9.5	8.9
	Cond.	450	478
	Temp(C)	20.0	20.0
6	pH	8.0	8.0
	O2 ppm	9.5	9.0
	Cond.	468	492
	Temp(C)	20.0	20.0
Control	pH	8.1	8.0
	O2 ppm	9.4	9.1
	Cond.	478	500
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05890123

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical

Control point : combined effluent, (400)

Laboratory : Pollutech
Sampling Method : Grab
Sampled By : P. Tymstra
Date Collected : 12/11/89
Received : 12/11/89
Tested : 12/12/89 at: 1200

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00 48:00		%
100	0	2	16
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890123

TEST CONC. %	ELAPSED TIME	
	00:00 48:00	

100	pH	7.9	7.7
	O2 ppm	9.5	9.2
	Cond.	205	215
	Temp(C)	20.0	20.0
50	pH	8.2	7.9
	O2 ppm	9.2	9.5
	Cond.	350	365
	Temp(C)	20.0	20.0
26	pH	8.3	8.0
	O2 ppm	9.3	9.4
	Cond.	420	430
	Temp(C)	20.0	20.0
13	pH	8.3	8.0
	O2 ppm	9.3	9.3
	Cond.	450	465
	Temp(C)	20.0	20.0
6	pH	8.4	7.9
	O2 ppm	9.4	9.0
	Cond.	452	480
	Temp(C)	20.0	20.0
Control	pH	8.2	7.9
	O2 ppm	9.6	9.5
	Cond.	205	485
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05900016

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (400)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : P. Tymstra
Date Collected : 01/08/90
Received : 01/08/90
Tested : 01/08/90 at: 1245
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00 49:10		%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments : Duplicate also tested

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900016

TEST CONC.	ELAPSED TIME	
%	00:00 49:10	

100	pH	7.8	8.0
	O2 ppm	9.5	8.8
	Cond.	188	222
	Temp(C)	20.0	20.0
50	pH	8.0	8.1
	O2 ppm	9.2	8.9
	Cond.	360	370
	Temp(C)	20.0	20.0
26	pH	8.1	8.2
	O2 ppm	9.2	9.0
	Cond.	412	438
	Temp(C)	20.0	20.0
13	pH	8.1	8.2
	O2 ppm	9.1	9.0
	Cond.	420	470
	Temp(C)	20.0	20.0
6	pH	8.1	8.1
	O2 ppm	9.2	8.8
	Cond.	470	486
	Temp(C)	20.0	20.0
Control	pH	8.1	8.1
	O2 ppm	9.2	9.2
	Cond.	488	488
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05900029

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (400)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C. Ferguson
Date Collected : 02/12/90
Received : 02/12/90
Tested : 02/12/90 at: 1400
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00	49:00	%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

TOXICITY TEST PARAMETERS

Sample Number: 05900029

TEST CONC. %	ELAPSED TIME	
	00:00	49:00

100	pH	7.9	8.0
	O2 ppm	9.4	8.4
	Cond.	225	232
	Temp(C)	20.0	20.0
50	pH	8.1	8.2
	O2 ppm	9.1	8.5
	Cond.	365	370
	Temp(C)	20.0	20.0
26	pH	8.2	8.3
	O2 ppm	9.0	8.6
	Cond.	432	432
	Temp(C)	20.0	20.0
13	pH	8.2	8.4
	O2 ppm	9.1	8.7
	Cond.	468	468
	Temp(C)	20.0	20.0
6	pH	8.2	8.4
	O2 ppm	9.2	8.7
	Cond.	485	488
	Temp(C)	20.0	20.0
Control	pH	8.2	8.4
	O2 ppm	9.2	9.0
	Cond.	490	500
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05900068

TEST CONDITIONS

Company : Polysar Limited
 Sarnia, ONT
 (30007)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (400)
 Laboratory : Pollutech
 Sampling Method : Grab
 Sampled By : C. Ferguson
 Date Collected : 03/26/90
 Received : 03/26/90
 Tested : 03/27/90 at: 1110
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00	48:20	%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900068

TEST CONC. %	ELAPSED TIME	
	00:00	48:20

100	pH	7.8	7.9
	O2 ppm	9.4	9.2
	Cond.	212	218
	Temp(C)	20.0	20.0
50	pH	8.1	8.1
	O2 ppm	9.3	9.2
	Cond.	360	370
	Temp(C)	20.0	20.0
26	pH	8.1	8.1
	O2 ppm	9.2	9.2
	Cond.	430	440
	Temp(C)	20.0	20.0
13	pH	8.2	8.1
	O2 ppm	9.3	9.2
	Cond.	460	468
	Temp(C)	20.0	20.0
6	pH	8.2	8.1
	O2 ppm	9.3	9.2
	Cond.	480	490
	Temp(C)	20.0	20.0
Control	pH	8.2	8.1
	O2 ppm	9.4	9.2
	Cond.	490	498
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05890085

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (500)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C. Ferguson
Date Collected : 10/16/89
Received : 10/16/89
Tested : 10/16/89 at: 1440
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00 48:10		%
100	0	2	16
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :TOXICITY TEST PARAMETERS

Sample Number: 05890085

TEST CONC. %	ELAPSED TIME	
	00:00 48:10	

100	pH	8.3	8.0
	O2 ppm	9.0	9.4
	Cond.	200	215
	Temp(C)	20.0	20.0
50	pH	8.0	8.0
	O2 ppm	8.7	9.4
	Cond.	350	360
	Temp(C)	20.0	20.0
26	pH	7.9	8.1
	O2 ppm	8.6	9.3
	Cond.	415	440
	Temp(C)	20.0	20.0
13	pH	7.9	8.1
	O2 ppm	8.7	9.4
	Cond.	450	470
	Temp(C)	20.0	20.0
6	pH	7.7	8.1
	O2 ppm	8.6	9.4
	Cond.	475	490
	Temp(C)	20.0	20.0
Control	pH	7.7	8.0
	O2 ppm	8.8	9.2
	Cond.	490	490
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05890114

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (500)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C. Ferguson
Date Collected : 11/20/89
Received : 11/20/89
Tested : 11/20/89 at: 1135
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00 48:10		%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890114

TEST CONC.	ELAPSED TIME	
%	00:00 48:10	

100	pH	8.1	8.1
	O2 ppm	10.3	8.7
	Cond.	198	206
	Temp(C)	20.0	20.0
50	pH	8.2	8.2
	O2 ppm	9.8	8.7
	Cond.	350	358
	Temp(C)	20.0	20.0
26	pH	8.2	8.2
	O2 ppm	9.6	8.7
	Cond.	420	426
	Temp(C)	20.0	20.0
13	pH	8.2	8.2
	O2 ppm	9.4	8.8
	Cond.	456	462
	Temp(C)	20.0	20.0
6	pH	8.1	8.2
	O2 ppm	9.4	8.8
	Cond.	470	480
	Temp(C)	20.0	20.0
Control	pH	8.1	8.2
	O2 ppm	9.6	9.0
	Cond.	490	490
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05890132

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (500)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C. Ferguson
Date Collected : 12/18/89
Received : 12/18/89
Tested : 12/19/89 at: 1200
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00	48:00	%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890132

TEST CONC. %	ELAPSED TIME	
	00:00	48:00

100	pH	8.3	8.2
	O2 ppm	10.4	8.8
	Cond.	202	229
	Temp(C)	20.0	20.0
50	pH	8.3	8.3
	O2 ppm	9.6	8.6
	Cond.	352	372
	Temp(C)	20.0	20.0
26	pH	8.4	8.3
	O2 ppm	9.4	8.8
	Cond.	420	438
	Temp(C)	20.0	20.0
13	pH	8.4	8.3
	O2 ppm	9.3	8.9
	Cond.	454	472
	Temp(C)	20.0	20.0
6	pH	8.4	8.3
	O2 ppm	9.2	8.9
	Cond.	464	470
	Temp(C)	20.0	20.0
Control	pH	8.4	8.3
	O2 ppm	9.4	9.2
	Cond.	480	490
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05900014

TEST CONDITIONS

Company : Polysar Limited
 : Sarnia, ONT
 : (30007)
 Region : Southwest
 Industry : Organic Chemical

 Control point : combined effluent, (500)

 Laboratory : Pollutech
 Sampling Method : Grab
 Sampled By : P.Tymstra
 Date Collected : 01/15/90
 Received : 01/15/90
 Tested : 01/15/90 at: 1330

 Type of Bioassay : STATIC
 : (Daphnia magna Acute Lethality Toxicity
 : Test Protocol. OME, 1988)

 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00 48:00		%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal
 95% fid. limits : 0.0 - 0.0 %
 Comments :

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900014

TEST CONC.	ELAPSED TIME	
%	00:00 48:00	

100	pH	8.2	7.9
	O2 ppm	10.1	9.2
	Cond.	206	210
	Temp(C)	20.0	20.0
50	pH	8.2	8.2
	O2 ppm	9.1	9.2
	Cond.	330	362
	Temp(C)	20.0	20.0
26	pH	8.2	8.2
	O2 ppm	8.9	9.1
	Cond.	434	429
	Temp(C)	20.0	20.0
13	pH	8.2	8.2
	O2 ppm	8.8	9.2
	Cond.	470	462
	Temp(C)	20.0	20.0
6	pH	8.2	8.2
	O2 ppm	9.0	9.2
	Cond.	490	492
	Temp(C)	20.0	20.0
Control	pH	8.2	8.2
	O2 ppm	9.0	9.1
	Cond.	500	495
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05900038

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (500)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C. Ferguson
Date Collected : 02/19/90
Received : 02/19/90
Tested : 02/19/90 at: 1205
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00	48:00	%
100	0	12	100
50	0	12	100
26	0	12	100
13	0	12	100
6	0	12	100
Control	0	0	0

48 Hour LC50 : 0.0 - 6.0 %

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900038

TEST CONC. %	ELAPSED TIME	
	00:00	48:00

100	pH	8.4	8.2
	O2 ppm	10.2	9.3
	Cond.	214	222
	Temp(C)	20.0	20.0
50	pH	8.4	8.3
	O2 ppm	9.4	9.4
	Cond.	360	360
	Temp(C)	20.0	20.0
26	pH	8.4	8.4
	O2 ppm	9.2	9.1
	Cond.	428	420
	Temp(C)	20.0	20.0
13	pH	8.6	8.4
	O2 ppm	9.2	9.2
	Cond.	460	452
	Temp(C)	20.0	20.0
6	pH	8.4	8.4
	O2 ppm	9.2	9.1
	Cond.	478	469
	Temp(C)	20.0	20.0
Control	pH	8.4	8.3
	O2 ppm	9.4	9.2
	Cond.	4990	492
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05900060

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (500)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C. Ferguson
Date Collected : 03/19/90
Received : 03/19/90
Tested : 03/19/90 at: 1450
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00 48:00		%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900060

TEST CONC. %	ELAPSED TIME	
	00:00 48:00	

100	pH	8.3	8.1
	O2 ppm	10.4	9.2
	Cond.	200	206
	Temp(C)	20.0	20.0
50	pH	8.4	8.2
	O2 ppm	9.4	9.0
	Cond.	360	360
	Temp(C)	20.0	20.0
26	pH	8.4	8.2
	O2 ppm	9.2	8.9
	Cond.	430	430
	Temp(C)	20.0	20.0
13	pH	8.4	8.3
	O2 ppm	9.2	8.9
	Cond.	460	462
	Temp(C)	20.0	20.0
6	pH	8.4	8.3
	O2 ppm	9.2	8.9
	Cond.	470	482
	Temp(C)	20.0	20.0
Control	pH	8.4	8.2
	O2 ppm	9.2	8.9
	Cond.	510	499
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05890087

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical

Control point : combined effluent, (1100)

Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C. Ferguson
Date Collected : 10/16/89
Received : 10/16/89
Tested : 10/16/89 at: 1450

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00 48:55		%
100	0	0	0
50	0	0	0
25	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :TOXICITY TEST PARAMETERS

Sample Number: 05890087

TEST CONC. %	ELAPSED TIME	
	00:00 48:55	

100	pH	7.1	7.8
	O2 ppm	9.2	8.5
	Cond.	220	224
	Temp(C)	20.0	20.0
50	pH	8.0	7.9
	O2 ppm	8.8	8.9
	Cond.	380	375
	Temp(C)	20.0	20.0
25	pH	8.0	8.0
	O2 ppm	9.4	9.0
	Cond.	440	440
	Temp(C)	20.0	20.0
13	pH	8.0	8.0
	O2 ppm	8.4	9.2
	Cond.	460	475
	Temp(C)	20.0	20.0
6	pH	8.0	8.0
	O2 ppm	8.4	9.1
	Cond.	480	495
	Temp(C)	20.0	20.0
Control	pH	7.8	8.0
	O2 ppm	8.8	9.1
	Cond.	490	495
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05890113

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (1100)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C.Ferguson
Date Collected : 11/20/89
Received : 11/20/89
Tested : 11/20/89 at: 1150
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00 48:05		%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890113

TEST CONC. %	ELAPSED TIME	
	00:00 48:05	

100	pH	7.9	8.0
	O2 ppm	10.4	8.7
	Cond.	274	282
	Temp(C)	20.0	20.0
50	pH	8.1	8.1
	O2 ppm	9.8	8.7
	Cond.	386	390
	Temp(C)	20.0	20.0
26	pH	8.1	8.2
	O2 ppm	9.6	8.7
	Cond.	434	436
	Temp(C)	20.0	20.0
13	pH	8.1	8.2
	O2 ppm	9.6	8.8
	Cond.	460	462
	Temp(C)	20.0	20.0
6	pH	8.1	8.2
	O2 ppm	9.5	8.8
	Cond.	472	472
	Temp(C)	20.0	20.0
Control	pH	8.1	8.3
	O2 ppm	9.6	9.1
	Cond.	490	490
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05890131

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (1100)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C. Ferguson
Date Collected : 12/18/89
Received : 12/18/89
Tested : 12/18/89 at: 1215
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00	48:15	%
100	0	1	8
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890131

TEST CONC. %	ELAPSED TIME	
	00:00	48:15

100	pH	8.1	8.1
	O2 ppm	9.0	9.0
	Cond.	218	234
	Temp(C)	20.0	20.0
50	pH	8.2	8.2
	O2 ppm	9.6	8.9
	Cond.	360	380
	Temp(C)	20.0	20.0
26	pH	8.4	8.3
	O2 ppm	9.4	8.9
	Cond.	420	440
	Temp(C)	20.0	20.0
13	pH	8.4	8.3
	O2 ppm	9.2	8.9
	Cond.	452	474
	Temp(C)	20.0	20.0
6	pH	8.4	8.4
	O2 ppm	9.2	8.9
	Cond.	470	498
	Temp(C)	20.0	20.0
Control	pH	8.4	8.4
	O2 ppm	9.4	8.9
	Cond.	480	500
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05900012

TEST CONDITIONS

Company : Polysar Limited
 Sarnia, ONT
 (30007)
 Region : Southwest
 Industry : Organic Chemical
 Control point : combined effluent, (1100)
 Laboratory : Pollutech
 Sampling Method : Grab
 Sampled By : P. Tymstra
 Date Collected : 01/15/90
 Received : 01/15/90
 Tested : 01/15/90 at: 1345
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00	48:00	%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	1	8
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900012

TEST CONC. %	ELAPSED TIME	
	00:00	48:00

100	pH	7.8	7.8
	O2 ppm	10.0	9.0
	Cond.	266	272
	Temp(C)	20.0	20.0
50	pH	8.1	7.9
	O2 ppm	9.1	9.1
	Cond.	390	385
	Temp(C)	20.0	20.0
26	pH	8.2	8.2
	O2 ppm	8.9	9.1
	Cond.	450	440
	Temp(C)	20.0	20.0
13	pH	8.2	8.3
	O2 ppm	8.8	9.2
	Cond.	478	470
	Temp(C)	20.0	20.0
6	pH	8.2	8.2
	O2 ppm	8.8	9.2
	Cond.	490	482
	Temp(C)	20.0	20.0
Control	pH	8.2	8.3
	O2 ppm	9.0	9.2
	Cond.	500	495
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05900040

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (1100)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C. Ferguson
Date Collected : 02/19/90
Received : 02/19/90
Tested : 02/20/90 at: 1230
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00	48:00	%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900040

TEST CONC. %	ELAPSED TIME	
	00:00	48:00

100	pH	8.0	8.1
	O2 ppm	10.3	9.3
	Cond.	312	300
	Temp(C)	20.0	20.0
50	pH	8.2	8.3
	O2 ppm	9.4	9.2
	Cond.	410	400
	Temp(C)	20.0	20.0
26	pH	8.3	8.3
	O2 ppm	9.2	9.2
	Cond.	450	440
	Temp(C)	20.0	20.0
13	pH	8.4	8.3
	O2 ppm	9.1	9.2
	Cond.	472	460
	Temp(C)	20.0	20.0
6	pH	8.4	8.4
	O2 ppm	9.1	9.2
	Cond.	480	470
	Temp(C)	20.0	20.0
Control	pH	8.4	8.4
	O2 ppm	9.4	9.2
	Cond.	490	490
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05900059

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : combined effluent, (1100)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C. Ferguson
Date Collected : 03/19/90
Received : 03/19/90
Tested : 03/19/90 at: 1545
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00 48:00		%
100	0	12	100
50	0	3	25
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : 59.7 %

95% fid. limits : 50.5 - 70.7 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : Spearman-Kärber

TOXICITY TEST PARAMETERS

Sample Number: 05900059

TEST CONC.	ELAPSED TIME	
%	00:00 48:00	

100	pH	8.1	7.3
	O2 ppm	10.6	8.8
	Cond.	280	290
	Temp(C)	20.0	20.0
50	pH	8.3	8.1
	O2 ppm	9.6	8.8
	Cond.	398	398
	Temp(C)	20.0	20.0
26	pH	8.3	8.2
	O2 ppm	9.4	8.8
	Cond.	448	446
	Temp(C)	20.0	20.0
13	pH	8.4	8.3
	O2 ppm	9.4	8.9
	Cond.	474	470
	Temp(C)	20.0	20.0
6	pH	8.4	8.3
	O2 ppm	9.4	8.9
	Cond.	488	470
	Temp(C)	20.0	20.0
Control	pH	8.4	8.3
	O2 ppm	9.4	9.0
	Cond.	510	500
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05890095

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : OT cooling water, (1400)
Laboratory : Pollutech
Sampling Method : grab
Sampled By : C. Ferguson
Date Collected : 11/06/89
Received : 11/06/89
Tested : 11/07/89 at: 1625
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00 48:05		%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : noneTOXICITY TEST PARAMETERS

Sample Number: 05890095

TEST CONC. %	ELAPSED TIME	
	00:00 48:05	

100	pH	7.9	8.0
	O2 ppm	9.3	8.7
	Cond.	195	196
	Temp(C)	20.0	20.0
50	pH	7.8	8.0
	O2 ppm	9.3	8.5
	Cond.	299	312
	Temp(C)	20.0	20.0
26	pH	7.8	8.0
	O2 ppm	9.2	8.6
	Cond.	350	360
	Temp(C)	20.0	20.0
13	pH	7.8	8.0
	O2 ppm	9.3	8.6
	Cond.	360	380
	Temp(C)	20.0	20.0
6	pH	7.7	8.0
	O2 ppm	9.3	8.6
	Cond.	395	388
	Temp(C)	20.0	20.0
Control	pH	7.7	8.0
	O2 ppm	9.4	8.6
	Cond.	400	400
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05900022

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : OT cooling water, (1400)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C.Ferguson
Date Collected : 02/05/90
Received : 02/05/90
Tested : 02/06/90 at: 1000
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E		TOTAL MORTALITY
%	00:00 48:00		%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900022

TEST CONC. %	E L A P S E D T I M E	
	00:00 48:00	

100	pH	7.7	7.9
	O2 ppm	9.6	8.4
	Cond.	195	218
	Temp(C)	20.0	20.0
50	pH	8.0	8.2
	O2 ppm	9.4	8.6
	Cond.	348	402
	Temp(C)	20.0	20.0
26	pH	8.1	8.2
	O2 ppm	9.4	8.6
	Cond.	420	452
	Temp(C)	20.0	20.0
13	pH	8.2	8.2
	O2 ppm	9.4	8.6
	Cond.	448	470
	Temp(C)	20.0	20.0
6	pH	8.2	8.2
	O2 ppm	9.3	8.7
	Cond.	472	470
	Temp(C)	20.0	20.0
Control	pH	8.1	8.2
	O2 ppm	9.4	8.8
	Cond.	492	520
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05890097

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : OT cooling water, (1600)
Laboratory : Pollutech
Sampling Method : grab
Sampled By : C. Ferguson
Date Collected : 11/06/89
Received : 11/06/89
Tested : 11/08/89 at: 1210
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00 48:30		%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	1	8
Control	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 05890097

TEST CONC. %	ELAPSED TIME	
	00:00 48:30	

100	pH	7.8	7.9
	O2 ppm	9.3	8.8
	Cond.	192	192
	Temp(C)	20.0	20.0
50	pH	7.9	8.0
	O2 ppm	9.2	8.9
	Cond.	349	345
	Temp(C)	20.0	20.0
26	pH	8.0	8.1
	O2 ppm	9.2	9.0
	Cond.	412	420
	Temp(C)	20.0	20.0
13	pH	8.0	8.1
	O2 ppm	9.1	9.2
	Cond.	450	452
	Temp(C)	20.0	20.0
6	pH	8.0	8.1
	O2 ppm	9.2	9.2
	Cond.	462	472
	Temp(C)	20.0	20.0
Control	pH	8.0	8.1
	O2 ppm	9.4	9.3
	Cond.	465	480
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05900024

TEST CONDITIONS

Company : Polysar Limited
 : Sarnia, ONT
 : (30007)
 Region : Southwest
 Industry : Organic Chemical

 Control point : OT cooling water, (1600)

 Laboratory : Pollutech
 Sampling Method : Grab
 Sampled By : C. Ferguson
 Date Collected : 02/05/90
 : Received
 : 02/05/90
 : Tested
 : 02/07/90 at: 1020

 Type of Bioassay : STATIC
 : (Daphnia magna Acute Lethality Toxicity
 : Test Protocol. OME, 1988)

 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00 48:10		%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

 SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900024

TEST CONC.	ELAPSED TIME	
%	00:00 48:10	

100	pH	7.9	7.9
	O2 ppm	8.6	9.0
	Cond.	230	230
	Temp(C)	20.0	20.0
50	pH	8.1	8.0
	O2 ppm	8.7	9.2
	Cond.	380	370
	Temp(C)	20.0	20.0
26	pH	8.1	8.1
	O2 ppm	8.8	9.3
	Cond.	450	430
	Temp(C)	20.0	20.0
13	pH	8.1	8.1
	O2 ppm	8.8	9.2
	Cond.	482	460
	Temp(C)	20.0	20.0
6	pH	8.1	8.1
	O2 ppm	8.8	9.2
	Cond.	500	490
	Temp(C)	20.0	20.0
Control	pH	8.2	8.1
	O2 ppm	8.8	9.2
	Cond.	520	510
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05890091

TEST CONDITIONS

Company : Polysar Limited
 Sarnia, ONT
 (30007)
 Region : Southwest
 Industry : Organic Chemical

 Control point : Batch, (1700)

 Laboratory : Pollutech
 Sampling Method : Grab
 Sampled By : C.Ferguson
 Date Collected : 10/30/89
 Received : 10/30/89
 Tested : 10/30/89 at: 1610

 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00 48:20		%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal
 95% fid. limits : 0.0 - 0.0 %
 Comments :

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890091

TEST CONC. %	ELAPSED TIME	
	00:00 48:20	

100	pH	7.5	7.8
	O2 ppm	8.4	6.8
	Cond.	3510	3310
	Temp(C)	20.0	20.0
50	pH	7.6	8.0
	O2 ppm	8.4	7.5
	Cond.	2070	2000
	Temp(C)	20.0	20.0
26	pH	7.8	7.9
	O2 ppm	8.8	7.9
	Cond.	1320	1280
	Temp(C)	20.0	20.0
13	pH	8.0	8.2
	O2 ppm	8.6	8.2
	Cond.	910	880
	Temp(C)	20.0	20.0
6	pH	8.1	8.2
	O2 ppm	8.7	8.4
	Cond.	700	550
	Temp(C)	20.0	20.0
Control	pH	7.9	8.2
	O2 ppm	8.8	9.0
	Cond.	498	490
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05890115

TEST CONDITIONS

Company : Polysar Limited
 : Sarnia, ONT
 : (30007)
 Region : Southwest
 Industry : Organic Chemical
 Control point : Batch, (1700)
 Laboratory : Pollutech
 Sampling Method : Grab
 Sampled By : C. Ferguson
 Date Collected : 11/20/89
 Received : 11/20/89
 Tested : 11/21/89 at: 1455
 Type of Bioassay : STATIC
 : (Daphnia magna Acute Lethality Toxicity
 : Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00 49:15		%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal
 95% fid. limits : 0.0 - 0.0 %
 Comments :

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890115

TEST CONC. %	ELAPSED TIME	
	00:00 49:15	

100	pH	7.0	7.5
	O2 ppm	9.2	8.5
	Cond.	3820	4010
	Temp(C)	20.0	20.0
50	pH	7.4	7.8
	O2 ppm	9.5	8.6
	Cond.	2280	2310
	Temp(C)	20.0	20.0
26	pH	7.7	7.9
	O2 ppm	9.6	9.0
	Cond.	1420	1460
	Temp(C)	20.0	20.0
13	pH	7.4	8.0
	O2 ppm	9.8	9.0
	Cond.	980	990
	Temp(C)	20.0	20.0
6	pH	8.0	8.2
	O2 ppm	9.8	8.8
	Cond.	700	730
	Temp(C)	20.0	20.0
Control	pH	8.1	8.1
	O2 ppm	9.8	9.0
	Cond.	500	495
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05890134

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : Batch, (1700)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C. Ferguson
Date Collected : 12/18/89
Received : 12/18/89
Tested : 12/18/89 at: 1600
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00	48:00	%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890134

TEST CONC. %	ELAPSED TIME	
	00:00	48:00

100	pH	6.9	7.5
	O2 ppm	8.1	7.7
	Cond.	3900	4020
	Temp(C)	20.0	20.0
50	pH	7.5	7.9
	O2 ppm	8.7	8.3
	Cond.	2220	2300
	Temp(C)	20.0	20.0
26	pH	7.9	8.1
	O2 ppm	8.8	8.6
	Cond.	1400	1440
	Temp(C)	20.0	20.0
13	pH	8.2	8.2
	O2 ppm	9.0	8.9
	Cond.	960	1000
	Temp(C)	20.0	20.0
6	pH	8.3	8.3
	O2 ppm	9.1	9.0
	Cond.	700	700
	Temp(C)	20.0	20.0
Control	pH	8.2	8.2
	O2 ppm	9.3	9.3
	Cond.	490	490
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05900017

TEST CONDITIONS

Company : Polysar Limited
 : Sarnia, ONT
 : (30007)
 Region : Southwest
 Industry : Organic Chemical

 Control point : Batch, (1700)

 Laboratory : Pollutech
 Sampling Method : Grab
 Sampled By : P. Tymstra
 Date Collected : 01/15/90
 Received : 01/15/90
 Tested : 01/16/90 at: 1510

 Type of Bioassay : STATIC
 : (Daphnia magna Acute Lethality Toxicity
 : Test Protocol. OME, 1988)

 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00 48:20		%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

 SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900017

TEST CONC. %	ELAPSED TIME
	00:00 48:20

100	pH	9.0	8.6
	O2 ppm	8.7	8.6
	Cond.	4200	4410
	Temp(C)	20.0	20.0
50	pH	8.7	8.5
	O2 ppm	8.9	8.7
	Cond.	2490	2498
	Temp(C)	20.0	20.0
26	pH	8.5	8.4
	O2 ppm	9.2	9.0
	Cond.	1520	1580
	Temp(C)	20.0	20.0
13	pH	8.4	8.2
	O2 ppm	9.2	9.2
	Cond.	1020	1050
	Temp(C)	20.0	20.0
6	pH	8.3	8.3
	O2 ppm	9.2	9.3
	Cond.	700	725
	Temp(C)	20.0	20.0
Control	pH	8.2	8.2
	O2 ppm	9.2	9.2
	Cond.	492	500
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05900041

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : Batch, (1700)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C.Ferguson
Date Collected : 02/19/90
Received : 02/19/90
Tested : 02/19/90 at: 1220
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. ONE, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00 48:00		%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900041

TEST CONC. %	ELAPSED TIME	
	00:00 48:00	

100	pH	7.4	7.7
	O2 ppm	8.4	7.0
	Cond.	4560	4500
	Temp(C)	20.0	20.0
50	pH	7.7	7.9
	O2 ppm	8.8	7.9
	Cond.	2600	2520
	Temp(C)	20.0	20.0
26	pH	8.0	8.2
	O2 ppm	8.9	8.2
	Cond.	1620	1540
	Temp(C)	20.0	20.0
13	pH	8.2	8.3
	O2 ppm	9.0	8.8
	Cond.	1080	1020
	Temp(C)	20.0	20.0
6	pH	8.3	8.3
	O2 ppm	9.0	9.0
	Cond.	780	740
	Temp(C)	20.0	20.0
Control	pH	8.4	8.4
	O2 ppm	9.4	9.2
	Cond.	490	484
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05900061

TEST CONDITIONS

Company : Polysar Limited
 : Sarnia, ONT
 : (30007)
 Region : Southwest
 Industry : Organic Chemical

 Control point : Batch, (1700)

 Laboratory : Pollutech
 Sampling Method : Grab
 Sampled By : C.Ferguson
 Date Collected : 03/19/90
 Received : 03/19/90
 Tested : 03/19/90 at: 1500

 Type of Bioassay : STATIC
 : (Daphnia magna Acute Lethality Toxicity
 : Test Protocol. OME, 1988)

 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00 48:20		%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal
 95% fid. limits : 0.0 - 0.0 %
 Comments :

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900061

TEST CONC. %	ELAPSED TIME	
	00:00 48:20	

100	pH	8.2	8.2
	O2 ppm	8.4	8.0
	Cond.	4620	4580
	Temp(C)	20.0	20.0
50	pH	8.3	8.2
	O2 ppm	8.8	8.4
	Cond.	2620	2580
	Temp(C)	20.0	20.0
26	pH	8.4	8.2
	O2 ppm	8.9	8.6
	Cond.	1600	1580
	Temp(C)	20.0	20.0
13	pH	8.4	8.3
	O2 ppm	9.0	8.8
	Cond.	1080	1060
	Temp(C)	20.0	20.0
6	pH	8.4	8.3
	O2 ppm	9.0	8.9
	Cond.	780	760
	Temp(C)	20.0	20.0
Control	pH	8.4	8.3
	O2 ppm	9.2	9.0
	Cond.	510	500
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05890086

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : process effluent, (1800)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C. Ferguson
Date Collected : 10/16/89
Received : 10/16/89
Tested : 10/16/89 at: 1545
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00 49:35		%
100	0	0	0
50	0	1	8
26	0	0	0
13	0	0	0
6	0	1	8
Control	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890086

TEST CONC.	ELAPSED TIME	
%	00:00 49:35	

100	pH	6.6	7.5
	O2 ppm	6.8	9.4
	Cond.	1800	1900
	Temp(C)	20.0	20.0
50	pH	7.1	7.8
	O2 ppm	7.0	9.3
	Cond.	1090	1230
	Temp(C)	20.0	20.0
26	pH	7.5	7.9
	O2 ppm	8.3	9.2
	Cond.	890	900
	Temp(C)	20.0	20.0
13	pH	7.7	8.0
	O2 ppm	8.4	9.3
	Cond.	690	700
	Temp(C)	20.0	20.0
6	pH	7.8	8.1
	O2 ppm	8.6	9.4
	Cond.	590	590
	Temp(C)	20.0	20.0
Control	pH	7.8	7.8
	O2 ppm	8.8	9.3
	Cond.	490	485
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05890112

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : process effluent, (1800)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C. Ferguson
Date Collected : 11/20/89
Received : 11/20/89
Tested : 11/20/89 at: 1215
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00 48:00		%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	1	8
Control	0	0	0

48 Hour LC50 : >100%
95% fid. limits : 0.0 - 0.0 %
Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890112

TEST CONC. %	ELAPSED TIME	
	00:00 48:00	

100	pH	7.2	7.2
	O2 ppm	8.0	8.0
	Cond.	2400	2340
	Temp(C)	20.0	20.0
50	pH	7.5	7.9
	O2 ppm	9.0	8.6
	Cond.	1440	1460
	Temp(C)	20.0	20.0
26	pH	7.7	8.1
	O2 ppm	9.3	8.8
	Cond.	980	1000
	Temp(C)	20.0	20.0
13	pH	7.9	8.1
	O2 ppm	9.5	8.8
	Cond.	720	740
	Temp(C)	20.0	20.0
6	pH	8.0	8.1
	O2 ppm	9.5	9.2
	Cond.	600	600
	Temp(C)	20.0	20.0
Control	pH	8.1	8.1
	O2 ppm	9.6	9.2
	Cond.	490	490
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05890133

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : process effluent, (1800)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C.Ferguson
Date Collected : 12/18/89
Received : 12/18/89
Tested : 12/18/89 at: 1200
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00	48:00	%
100	0	0	0
50	0	0	0
26	0	1	8
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : >100%
95% fid. limits : 0.0 - 0.0 %
Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05890133

TEST CONC. %	ELAPSED TIME	
	00:00	48:00

100	pH	7.1	7.7
	O2 ppm	8.4	8.8
	Cond.	2400	2480
	Temp(C)	20.0	20.0
50	pH	7.6	8.1
	O2 ppm	8.9	9.0
	Cond.	1460	1480
	Temp(C)	20.0	20.0
26	pH	9.9	8.2
	O2 ppm	9.1	9.0
	Cond.	1000	1020
	Temp(C)	20.0	20.0
13	pH	8.1	8.3
	O2 ppm	9.1	9.0
	Cond.	760	780
	Temp(C)	20.0	20.0
6	pH	8.3	8.3
	O2 ppm	9.2	9.0
	Cond.	600	620
	Temp(C)	20.0	20.0
Control	pH	8.4	8.4
	O2 ppm	9.4	9.4
	Cond.	480	510
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05900013

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : process effluent, (1800)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : P. Tymstra
Date Collected : 01/15/90
Received : 01/15/90
Tested : 01/15/90 at: 1405
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00 48:35		%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments : Duplicate Tested

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900013

TEST CONC.	ELAPSED TIME	
%	00:00 48:35	

100	pH	7.3	8.0
	O2 ppm	7.6	8.5
	Cond.	2020	1995
	Temp(C)	20.0	20.0
50	pH	7.6	8.6
	O2 ppm	8.2	8.1
	Cond.	1260	1220
	Temp(C)	20.0	20.0
26	pH	7.8	8.1
	O2 ppm	8.4	8.8
	Cond.	900	895
	Temp(C)	20.0	20.0
13	pH	8.0	8.1
	O2 ppm	8.6	9.0
	Cond.	720	470
	Temp(C)	20.0	20.0
6	pH	8.1	8.2
	O2 ppm	8.8	9.2
	Cond.	600	600
	Temp(C)	20.0	20.0
Control	pH	8.2	8.2
	O2 ppm	9.0	9.1
	Cond.	500	495
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05900039

TEST CONDITIONS

Company : Polysar Limited
 Sarnia, ONT
 (30007)
 Region : Southwest
 Industry : Organic Chemical
 Control point : process effluent, (1800)
 Laboratory : Pollutech
 Sampling Method : Grab
 Sampled By : C. Ferguson
 Date Collected : 02/19/90
 Received : 02/19/90
 Tested : 02/19/90 at: 1230
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00	48:00	%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal
 95% fid. limits : 0.0 - 0.0 %
 Comments :

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900039

TEST CONC. %	ELAPSED TIME	
	00:00	48:00

100	pH	7.3	7.7
	O2 ppm	8.4	8.8
	Cond.	2460	2300
	Temp(C)	20.0	20.0
50	pH	7.7	8.0
	O2 ppm	8.8	9.1
	Cond.	1500	1400
	Temp(C)	20.0	20.0
26	pH	8.0	8.2
	O2 ppm	9.0	9.2
	Cond.	1020	990
	Temp(C)	20.0	20.0
13	pH	8.2	8.3
	O2 ppm	9.0	9.1
	Cond.	780	710
	Temp(C)	20.0	20.0
6	pH	8.3	8.3
	O2 ppm	9.0	9.2
	Cond.	620	600
	Temp(C)	20.0	20.0
Control	pH	8.4	8.4
	O2 ppm	9.4	9.2
	Cond.	490	488
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 05900058

TEST CONDITIONS

Company : Polysar Limited
Sarnia, ONT
(30007)
Region : Southwest
Industry : Organic Chemical
Control point : process effluent, (1800)
Laboratory : Pollutech
Sampling Method : Grab
Sampled By : C. Ferguson
Date Collected : 03/19/90
Received : 03/19/90
Tested : 03/19/90 at: 1440
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME		TOTAL MORTALITY
%	00:00 49:10		%
100	0	0	0
50	0	0	0
26	0	0	0
13	0	0	0
6	0	0	0
Control	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 05900058

TEST CONC. %	ELAPSED TIME	
	00:00 49:10	

100	pH	7.2	7.5
	O2 ppm	8.0	8.8
	Cond.	2000	1920
	Temp(C)	20.0	20.0
50	pH	7.6	7.9
	O2 ppm	8.6	8.9
	Cond.	1240	1200
	Temp(C)	20.0	20.0
26	pH	7.9	8.1
	O2 ppm	8.8	9.0
	Cond.	900	860
	Temp(C)	20.0	20.0
13	pH	8.2	8.2
	O2 ppm	9.0	9.1
	Cond.	700	700
	Temp(C)	20.0	20.0
6	pH	8.3	8.2
	O2 ppm	9.2	9.1
	Cond.	600	600
	Temp(C)	20.0	20.0
Control	pH	8.4	8.3
	O2 ppm	9.2	9.2
	Cond.	510	500
	Temp(C)	20.0	20.0

COMPANY: Rohm & Haas Canada Inc., Scarborough
(580001)
SECTOR: Organic Chemical
REGION: Central

SUMMARY

The initiation of acute toxicity monitoring by Rohm & Haas Canada Incorporated was delayed therefore no data has been submitted for the period between October 1989 and March 1990.

COMPANY: Rohm & Haas Canada Inc., Scarborough
(580001)
SECTOR: Organic Chemical
REGION: Central

SUMMARY

The toxicity monitoring for Rohm and Haas Canada Inc. of Scarborough has been delayed, therefore no data has been submitted for the period October 1989 to March 1990.

COMPANY: Rohm and Haas Canada Inc., Morrisburg
(580100)
SECTOR: Organic Chemical
REGION: Southeast

SUMMARY

The data for six trout bioassays, conducted on combined effluent samples collected between October 1989 and March 1990, were provided by Rohm and Haas Canada Incorporated. All six combined effluent samples were determined to have been non-acutely lethal to test fish.

combined effluent

03890233 sampled: 10/25/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

03890295 sampled: 11/21/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03890391 sampled: 12/19/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900079 sampled: 01/23/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900160 sampled: 02/27/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900227 sampled: 03/20/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; Non-lethal

process effluent

storm water

rain gauge

intake water

Rohm and Haas Canada Inc. (continued)

TOXICITY TEST REPORT

Sample: 03890233

TEST CONDITIONS

Company : Rohm and Haas Canada Inc.
 Morrisburg, ONT
 (580100)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : L. Ward
 Date Collected : 10/25/89
 Received : 10/26/89
 Tested : 10/26/89 at: 1300

Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890233

TEST CONC. %	ELAPSED TIME					
	00:00	04:00	24:00	48:00	72:00	96:00

Control	pH	7.7					7.9
	O2 ppm	8.1					7.8
	Cond.	573					564
	Temp(C)	15.0	15.0	15.0	15.0	15.5	16.0
10	pH	7.8					8.3
	O2 ppm	8.3					8.8
	Cond.	556					545
	Temp(C)	15.0	15.0	15.0	15.0	15.5	16.0
20	pH	7.8					8.0
	O2 ppm	8.3					8.1
	Cond.	537					527
	Temp(C)	15.0	15.0	15.0	15.0	15.5	16.0
40	pH	7.8					8.1
	O2 ppm	8.6					8.5
	Cond.	500					489
	Temp(C)	15.0	15.0	15.0	15.0	15.5	16.0
65	pH	7.8					7.8
	O2 ppm	8.6					7.8
	Cond.	452					445
	Temp(C)	15.0	15.0	15.0	15.0	15.5	16.0
100	pH	7.8					7.8
	O2 ppm	8.9					8.4
	Cond.	386					373
	Temp(C)	15.0	15.0	15.0	15.0	15.5	16.0

TOXICITY TEST REPORT

Sample: 03890295

TEST CONDITIONS

Company : Rohm and Haas Canada Inc.
 Morrisburg, ONT
 (580100)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : L. Ward
 Date Collected : 11/21/89
 Received : 11/23/89
 Tested : 11/23/89 at: 1600
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890295

TEST CONC. %	ELAPSED TIME						
	00:00	04:00	24:00	48:00	72:00	96:00	
Control	pH 7.9						8.5
	O2 ppm 8.9						9.7
	Cond. 563						555
	Temp(C) 14.5	14.5	14.5	14.5	14.5	14.5	14.0
10	pH 7.9						8.5
	O2 ppm 8.9						9.7
	Cond. 563						559
	Temp(C) 14.5	14.5	14.5	14.5	14.5	14.5	14.0
20	pH 7.9						8.4
	O2 ppm 8.9						9.6
	Cond. 556						549
	Temp(C) 14.5	14.5	14.5	14.5	14.5	14.5	14.0
40	pH 7.9						8.4
	O2 ppm 8.9						9.6
	Cond. 542						539
	Temp(C) 14.5	14.5	14.5	14.5	14.5	14.5	14.0
65	pH 7.8						7.7
	O2 ppm 9.0						7.8
	Cond. 504						510
	Temp(C) 14.5	14.5	14.5	14.5	14.5	14.5	14.0
100	pH 7.7						8.0
	O2 ppm 9.1						9.2
	Cond. 474						475
	Temp(C) 14.5	14.5	14.5	14.5	14.5	14.5	14.0

TOXICITY TEST REPORT

Sample: 03890391

TEST CONDITIONS

Company : Rohm and Haas Canada Inc.
 Morrisburg, ONT
 (580100)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : L. Ward
 Date Collected : 12/19/89
 Received : 12/21/89
 Tested : 12/22/89 at: 1000
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY	
	%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890391

TEST CONC. %	ELAPSED TIME				
	00:00	24:00	48:00	72:00	96:00

100	pH	8.0				8.1
	O2 ppm	9.3				8.8
	Cond.	357				360
	Temp(C)	15.0	14.0	14.0	14.0	14.5
65	pH	7.9				8.3
	O2 ppm	9.2				8.8
	Cond.	427				429
	Temp(C)	15.0	14.0	14.0	14.0	14.5
40	pH	7.9				8.0
	O2 ppm	9.1				7.5
	Cond.	479				480
	Temp(C)	15.0	14.0	14.0	14.0	14.5
20	pH	7.9				8.5
	O2 ppm	9.0				8.6
	Cond.	517				515
	Temp(C)	15.0	14.0	14.0	14.0	14.5
10	pH	7.9				8.5
	O2 ppm	8.9				8.7
	Cond.	536				529
	Temp(C)	15.0	14.0	14.0	14.0	14.5
5	pH	7.9				8.5
	O2 ppm	8.9				9.0
	Cond.	546				523
	Temp(C)	15.0	14.0	14.0	14.0	14.5
Control	pH	7.9				8.5
	O2 ppm	8.9				9.0
	Cond.	550				533
	Temp(C)	15.0	14.0	14.0	14.0	14.5

TOXICITY TEST REPORT

Sample: 03900079

TEST CONDITIONS

Company : Rohm and Haas Canada Inc.
 Morrisburg, ONT
 (580100)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : L. Ward
 Date Collected : 01/23/90
 Received : 01/25/90
 Tested : 01/27/90 at: 1700

Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal
 95% fid. limits : 0.0 - 0.0 %
 Comments : Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900079

TEST CONC.	E L A P S E D T I M E					
%	00:00	24:00	48:00	72:00	96:00	
100	pH	7.9			8.0	
	O2 ppm	9.0			10.1	
	Cond.	403			413	
	Temp(C)	15.0	14.5	14.0	15.0	14.5
Control	pH	7.8			8.4	
	O2 ppm	8.1			9.7	
	Cond.	548			548	
	Temp(C)	15.0	14.5	14.0	15.0	14.5

MISA Trout

TOXICITY TEST REPORT

Sample: 03900160

TEST CONDITIONS

Company : Rohm and Haas Canada Inc.
 Morrisburg, ONT
 (580100)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : L. Ward
 Date Collected : 02/27/90
 Received : 03/01/90
 Tested : 03/02/90 at: 1400
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal
 95% fid. limits : 0.0 - 0.0 %
 Comments : Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900160

TEST CONC. %	E L A P S E D T I M E				
	00:00	24:00	48:00	72:00	96:00
100	pH	7.6			8.0
	O2 ppm	8.4			9.5
	Cond.	399			397
	Temp(C)	15.0	14.5	14.0	14.0
100	pH	7.6			8.1
	O2 ppm	8.4			9.6
	Cond.	399			397
	Temp(C)	15.0	14.5	14.0	14.0
Control	pH	7.9			8.4
	O2 ppm	8.1			9.5
	Cond.	544			548
	Temp(C)	15.0	14.5	14.0	14.0
Control	pH	7.9			8.4
	O2 ppm	8.1			9.8
	Cond.	544			525
	Temp(C)	15.0	14.5	14.0	14.0

TOXICITY TEST REPORT

Sample: 03900227

TEST CONDITIONS

Company : Rohm and Haas Canada Inc.
 Morrisburg, ONT
 (580100)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : L. Ward
 Date Collected : 03/20/90
 Received : 03/22/90
 Tested : 03/22/90 at: 1435

Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	1	10

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test; Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900227

TEST CONC. %	ELAPSED TIME				
	00:00	24:00	48:00	72:00	96:00
100	pH 8.1				8.3
	O2 ppm 8.2				9.8
	Cond. 447				452
	Temp(C) 15.0	14.0	14.5	14.5	15.0
100	pH 8.1				8.3
	O2 ppm 8.2				9.8
	Cond. 447				452
	Temp(C) 15.0	14.0	14.5	14.5	15.0
Control	pH 7.9				8.5
	O2 ppm 7.9				9.6
	Cond. 549				528
	Temp(C) 15.0	14.0	14.5	14.5	15.0
Control	pH 7.9				8.5
	O2 ppm 7.9				9.6
	Cond. 549				528
	Temp(C) 15.0	14.0	14.5	14.5	15.0

COMPANY: Rohm and Haas Canada Inc., Morrisburg
(580100)
SECTOR: Organic Chemical
REGION: Southeast

SUMMARY

Data for six *Daphnia magna* acute lethality toxicity tests conducted on samples of Combined effluent collected between October 1989 and March 1990 were submitted by Rohm and Haas Canada Inc. of Morrisburg.

Four samples were not acutely lethal to *Daphnia*, and two samples had 48 h LC50s > 100%. One toxic sample induced an unusual toxic response in which the greatest number of mortalities occurred in the middle concentrations of effluent.

combined effluent

03890233 sampled: 10/25/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03890295 sampled: 11/21/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 > 100

03890391 sampled: 12/19/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900079 sampled: 01/23/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900160 sampled: 02/27/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900227 sampled: 03/20/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

process effluent

storm water

Rohm and Haas Canada Inc. (continued)

rain gauge

intake water

TOXICITY TEST REPORT

Sample: 03890233

TEST CONDITIONS

Company : Rohm and Haas Canada Inc.
 Morrisburg, ONT
 (580100)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : L. Ward
 Date Collected : 10/25/89
 Received : 10/26/89
 Tested : 10/26/89 at: 1230
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E				TOTAL MORTALITY %
	%	00:00	04:00	24:00	48:00
Control	0	0	0	0	0
6	0	0	1	2	16
13	0	0	1	2	16
25	0	0	1	2	16
50	0	0	0	0	0
100	0	0	0	1	8

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890233

TEST CONC. %	E L A P S E D T I M E			
	00:00	04:00	24:00	48:00

Control	pH	7.5			7.9
	O2 ppm	7.8			8.9
	Cond.	303			301
	Temp(C)	20.0	20.5	20.0	20.0
6	pH	7.5			7.9
	O2 ppm	8.0			8.6
	Cond.	305			308
	Temp(C)	20.0	20.5	20.0	20.0
13	pH	7.6			7.9
	O2 ppm	8.1			8.4
	Cond.	312			316
	Temp(C)	20.0	20.5	20.0	20.0
25	pH	7.6			7.7
	O2 ppm	8.1			7.8
	Cond.	323			324
	Temp(C)	20.0	20.5	20.0	20.0
50	pH	7.6			7.4
	O2 ppm	8.2			6.4
	Cond.	343			344
	Temp(C)	20.0	20.5	20.0	20.0
100	pH	7.7			7.1
	O2 ppm	8.5			5.2
	Cond.	387			382
	Temp(C)	20.0	20.5	20.0	20.0

TOXICITY TEST REPORT

Sample: 03890295

TEST CONDITIONS

Company : Rohm and Haas Canada Inc.
 Morrisburg, ONT
 (580100)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : L. Ward
 Date Collected : 11/21/89
 Received : 11/23/89
 Tested : 11/24/89 at: 1040
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E				TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	%
100	0	0	1	1	8
50	0	0	0	0	0
25	0	0	0	0	0
13	0	0	0	0	0
6	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 > 100

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890295

TEST
CONC.
%

E L A P S E D T I M E

00:00 04:00 24:00 48:00

100	pH	7.3			7.0
	O2 ppm	6.1			4.3
	Cond.	467			449
	Temp(C)	20.0	20.0	20.0	20.0
50	pH	7.6			7.4
	O2 ppm	7.5			4.6
	Cond.	389			381
	Temp(C)	20.0	20.0	20.0	20.0
25	pH	8.0			7.5
	O2 ppm	8.1			5.9
	Cond.	350			346
	Temp(C)	20.0	20.0	20.0	20.0
13	pH	8.1			7.7
	O2 ppm	8.4			7.4
	Cond.	339			330
	Temp(C)	20.0	20.0	20.0	20.0
6	pH	8.3			8.1
	O2 ppm	8.6			8.6
	Cond.	319			320
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH	8.5			8.4
	O2 ppm	9.0			9.9
	Cond.	301			316
	Temp(C)	20.0	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 03890391

TEST CONDITIONS

Company : Rohm and Haas Canada Inc.
 Morrisburg, ONT
 (580100)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : L. Ward
 Date Collected : 12/19/89
 Received : 12/21/89
 Tested : 12/21/89 at: 1550

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00	
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890391

TEST CONC. %	ELAPSED TIME		
	00:00	24:00	48:00

100	pH	8.2	7.7
	O2 ppm	9.4	7.0
	Cond.	350	356
	Temp(C)	20.0	20.0
50	pH	8.2	8.0
	O2 ppm	9.3	8.0
	Cond.	327	331
	Temp(C)	20.0	20.0
25	pH	8.3	8.2
	O2 ppm	9.1	8.3
	Cond.	313	318
	Temp(C)	20.0	20.0
13	pH	8.3	8.2
	O2 ppm	9.1	8.5
	Cond.	308	312
	Temp(C)	20.0	20.0
6	pH	8.4	8.3
	O2 ppm	9.1	8.6
	Cond.	306	311
	Temp(C)	20.0	20.0
Control	pH	8.4	8.3
	O2 ppm	9.6	8.0
	Cond.	308	302
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 03900079

TEST CONDITIONS

Company : Rohm and Haas Canada Inc.
 Morrisburg, ONT
 (580100)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : L. Ward
 Date Collected : 01/23/90
 Received : 01/25/90
 Tested : 01/26/90 at: 1225

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900079

TEST CONC. %	E L A P S E D T I M E		
	00:00	24:00	48:00
100	pH 7.5	7.8	
	O2 ppm 7.3	6.6	
	Cond. 397	402	
	Temp(C) 20.0	20.0	20.5
50	pH 8.0	8.1	
	O2 ppm 8.2	7.4	
	Cond. 341	349	
	Temp(C) 20.0	20.0	20.5
25	pH 8.3	8.3	
	O2 ppm 8.5	7.9	
	Cond. 318	324	
	Temp(C) 20.0	20.0	20.5
13	pH 8.3	8.4	
	O2 ppm 8.7	8.1	
	Cond. 310	311	
	Temp(C) 20.0	20.0	20.5
6	pH 8.4	8.5	
	O2 ppm 8.6	8.1	
	Cond. 296	303	
	Temp(C) 20.0	20.0	20.5
Control	pH 8.5	8.5	
	O2 ppm 8.8	8.2	
	Cond. 292	294	
	Temp(C) 20.0	20.0	20.5

TOXICITY TEST REPORT

Sample: 03900160

TEST CONDITIONS

Company : Rohm and Haas Canada Inc.
 Morrisburg, ONT
 (580100)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : L. Ward
 Date Collected : 02/27/90
 Received : 03/01/90
 Tested : 03/02/90 at: 935
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY %
	%	00:00	24:00 48:00	
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900160

TEST CONC. %	ELAPSED TIME		
	00:00	24:00	48:00

100	pH	7.6	7.2
	O2 ppm	7.7	5.1
	Cond.	383	381
	Temp(C)	20.0	20.5 20.5
50	pH	8.0	7.6
	O2 ppm	7.8	7.0
	Cond.	344	345
	Temp(C)	20.0	20.5 20.5
25	pH	8.3	8.0
	O2 ppm	7.8	8.0
	Cond.	326	328
	Temp(C)	20.0	20.5 20.5
13	pH	8.4	8.2
	O2 ppm	7.8	8.4
	Cond.	314	318
	Temp(C)	20.0	20.5 20.5
6	pH	8.4	8.4
	O2 ppm	7.8	8.5
	Cond.	303	312
	Temp(C)	20.0	20.5 20.5
Control	pH	8.5	8.4
	O2 ppm	8.1	8.7
	Cond.	303	305
	Temp(C)	20.0	20.5 20.5

TOXICITY TEST REPORT

Sample: 03900227

TEST CONDITIONS

Company : Rohm and Haas Canada Inc.
 Morrisburg, ONT
 (580100)
 Region : Southeast
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : L. Ward
 Date Collected : 03/20/90
 Received : 03/22/90
 Tested : 03/23/90 at: 1450
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00	
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900227

TEST CONC. %	ELAPSED TIME		
	00:00	24:00	48:00

100	pH	8.1	8.0
	O2 ppm	9.2	8.5
	Cond.	447	445
	Temp(C)	20.0	19.5
50	pH	8.2	8.1
	O2 ppm	8.9	8.7
	Cond.	366	371
	Temp(C)	20.0	19.5
25	pH	8.2	8.3
	O2 ppm	8.8	8.5
	Cond.	334	335
	Temp(C)	20.0	19.5
13	pH	8.2	8.4
	O2 ppm	8.8	8.4
	Cond.	316	317
	Temp(C)	20.0	19.5
6	pH	8.2	8.4
	O2 ppm	8.8	8.4
	Cond.	306	305
	Temp(C)	20.0	19.5
Control	pH	8.3	8.4
	O2 ppm	8.8	8.6
	Cond.	300	294
	Temp(C)	20.0	19.5

COMPANY: Stepan Canada Inc., Longford Mills
(140004)
SECTOR: Organic Chemical
REGION: Central

SUMMARY

The data for six trout bioassays, conducted on combined effluent samples collected between October 1989 and March 1990, were provided by Stepan Canada Incorporated. All six combined effluent samples were determined to have been non-acutely lethal to test fish.

combined effluent

08890441 sampled: 10/18/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

08890473 sampled: 11/15/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

08890492 sampled: 12/13/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

08900031 sampled: 01/17/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

08900111 sampled: 02/20/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

08900221 sampled: 03/21/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

process effluent

emergency overflow

rain gauge

intake water

Stepan Canada Inc. (continued)

TOXICITY TEST REPORT

Sample: 08890441

TEST CONDITIONS

Company : Stepan Canada Inc.
Longford Mills, ONT
(140004)
Region : Central
Industry : Organic Chemical
Control point : combined effluent, (100)
Laboratory : Integrated
Sampling Method : 24 HR. COMPOSITE
Sampled By : B. FREE
Date Collected : 10/18/89
Received : 10/19/89
Tested : 10/20/89 at: 1330
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E								TOTAL MORTALITY	
	%	00:00	01:00	02:00	04:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :TOXICITY TEST PARAMETERS

Sample Number: 08890441

TEST CONC. %	E L A P S E D T I M E							
		00:00	01:00	02:00	04:00	24:00	48:00	72:00 96:00
100	pH				7.4			7.3
	O2 ppm				7.6			9.4
	Cond.				357			530
	Temp(C)				15.0			15.0
65	pH				7.5			7.4
	O2 ppm				8.1			9.4
	Cond.				313			452
	Temp(C)				15.0			15.0
40	pH				7.5			7.4
	O2 ppm				7.5			9.4
	Cond.				282			396
	Temp(C)				15.0			15.0
30	pH				7.6			7.3
	O2 ppm				8.2			9.5
	Cond.				270			374
	Temp(C)				15.0			15.0
20	pH				7.5			7.5
	O2 ppm				8.1			9.6
	Cond.				257			351
	Temp(C)				15.0			15.0
10	pH				7.8			7.6
	O2 ppm				8.2			9.6
	Cond.				245			329
	Temp(C)				15.0			15.0
Control	pH				7.6			7.7
	O2 ppm				7.2			10.0
	Cond.				340			509
	Temp(C)				15.0			15.0

TOXICITY TEST REPORT

Sample: 08890473

TEST CONDITIONS

Company : Stepan Canada Inc.
Longford Mills, ONT
(140004)
Region : Central
Industry : Organic Chemical
Control point : combined effluent, (100)
Laboratory : INTEGRATED
Sampling Method : 24 HR COMPOSITE
Sampled By : W. JOHNSTON
Date Collected : 11/15/89
Received : 11/17/89
Tested : 11/17/89 at: 1230
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E								TOTAL MORTALITY
%	00:00	01:00	02:05	04:00	24:00	49:15	72:00	96:00	%
100	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 08890473

TEST CONC. %	E L A P S E D T I M E							
	00:00	01:00	02:05	04:00	24:00	49:15	72:00	96:00
100	pH 7.1							7.8
	O2 ppm 9.6							9.1
	Cond. 2240							2250
	Temp(C) 8.0				15.0			15.0
65	pH 7.2							8.1
	O2 ppm 8.8							8.7
	Cond. 1350							1470
	Temp(C) 10.0				15.0			15.0
40	pH 7.1							8.2
	O2 ppm 8.2							9.1
	Cond. 990							1160
	Temp(C) 11.0				15.0			15.0
30	pH 7.1							8.3
	O2 ppm 7.8							8.4
	Cond. 930							960
	Temp(C) 11.0				15.0			15.0
10	pH 6.9							8.4
	O2 ppm 7.6							7.5
	Cond. 860							870
	Temp(C) 11.0				15.0			15.0
Control	pH 7.2							8.4
	O2 ppm 7.3							8.2
	Cond. 550							720
	Temp(C) 12.0				15.0			15.0

TOXICITY TEST REPORT

Sample: 08890492

TEST CONDITIONS

Company : Stepan Canada Inc.
 Longford Mills, ONT
 (140004)
 Region : Central
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : Integrated
 Sampling Method : 24 hr composite
 Sampled By : W. JOHNSTON
 Date Collected : 12/13/89
 Received : 12/14/89
 Tested : 12/15/89 at: 1200
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME								TOTAL MORTALITY
%	00:00	01:00	02:02	04:00	23:55	48:30	71:50	96:10	%
100	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 08890492

TEST CONC. %	ELAPSED TIME							
	00:00	01:00	02:02	04:00	23:55	48:30	71:50	96:10
100	pH		7.8					8.0
	O2 ppm		7.3					7.4
	Cond.		600					650
	Temp(C)		14.0					15.0
65	pH		7.8					8.2
	O2 ppm		7.2					7.3
	Cond.		600					650
	Temp(C)		14.0					15.0
40	pH		7.8					8.3
	O2 ppm		7.1					7.4
	Cond.		650					700
	Temp(C)		14.0					15.0
30	pH		7.6					8.3
	O2 ppm		7.1					7.6
	Cond.		680					700
	Temp(C)		14.0					15.0
10	pH		7.6					8.5
	O2 ppm		7.2					7.6
	Cond.		660					720
	Temp(C)		14.0					15.0
Control	pH		7.7					8.7
	O2 ppm		7.2					7.6
	Cond.		680					700
	Temp(C)		14.0					15.0

TOXICITY TEST REPORT

Sample: 08900031

TEST CONDITIONS

Company : Stepan Canada Inc.
Longford Mills, ONT
(140004)
Region : Central
Industry : Organic Chemical
Control point : combined effluent, (100)
Laboratory : Integrated
Sampling Method : 24 hr composite
Sampled By : W Johnston
Date Collected : 01/17/90
Received : 01/18/90
Tested : 01/18/90 at: 1145
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME								TOTAL MORTALITY
%	00:00	01:10	02:35	04:25	25:55	48:55	72:55	97:55	%
100	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 08900031

TEST CONC. %	ELAPSED TIME							
	00:00	01:10	02:35	04:25	25:55	48:55	72:55	97:55
100	pH	8.1						8.2
	O2 ppm	7.0						7.6
	Cond.	610						620
	Temp(C)	14.0						13.5
65	pH	8.0						8.4
	O2 ppm	7.3						7.6
	Cond.	655						650
	Temp(C)	14.0						13.5
40	pH	8.0						8.5
	O2 ppm	7.4						7.6
	Cond.	700						690
	Temp(C)	14.0						13.5
30	pH	8.0						8.5
	O2 ppm	7.6						7.6
	Cond.	715						700
	Temp(C)	14.0						13.5
10	pH	8.0						8.6
	O2 ppm	7.6						7.6
	Cond.	760						720
	Temp(C)	14.0						13.5
5	pH	8.0						8.6
	O2 ppm	7.6						7.6
	Cond.	760						720
	Temp(C)	14.0						13.5
Control	pH	7.9						8.6
	O2 ppm	7.7						7.7
	Cond.	760						745
	Temp(C)	14.0						13.5

TOXICITY TEST REPORT

Sample: 08900111

TEST CONDITIONS

Company : Stepan Canada Inc.
Longford Mills, ONT
(140004)
Region : Central
Industry : Organic Chemical
Control point : combined effluent, (100)
Laboratory : integrated
Sampling Method : 24 hr composite
Sampled By : W Johnston
Date Collected : 02/20/90
Received : 02/23/90
Tested : 02/23/90 at: 1500
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME								TOTAL MORTALITY
	%	00:00	01:00	02:00	03:55	24:00	46:47	70:45	94:50
100	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 08900111

TEST CONC.	ELAPSED TIME							
	%	00:00	01:00	02:00	03:55	24:00	46:47	70:45 94:50
100	pH				7.8			8.0
	O2 ppm				8.3			8.0
	Cond.				425			495
	Temp(C)				15.0			16.0
65	pH				7.7			8.3
	O2 ppm				8.1			8.1
	Cond.				500			560
	Temp(C)				15.0			16.0
40	pH				7.7			8.3
	O2 ppm				7.7			8.1
	Cond.				600			650
	Temp(C)				15.0			16.0
30	pH				7.7			8.4
	O2 ppm				7.6			8.1
	Cond.				650			700
	Temp(C)				15.0			16.0
10	pH				7.7			8.3
	O2 ppm				7.5			8.0
	Cond.				700			750
	Temp(C)				15.0			16.0
5	pH				7.6			8.4
	O2 ppm				7.4			8.1
	Cond.				750			745
	Temp(C)				15.0			16.0
Control	pH				7.5			8.2
	O2 ppm				7.8			8.2
	Cond.				750			790
	Temp(C)				15.0			16.0

TOXICITY TEST REPORT

Sample: 08900221

TEST CONDITIONS

Company : Stepan Canada Inc.
Longford Mills, ONT
(140004)
Region : Central
Industry : Organic Chemical
Control point : combined effluent, (100)
Laboratory : Integrated
Sampling Method : grab
Sampled By : J. R. Teeple
Date Collected : 03/21/90
Received : 03/22/90
Tested : 03/23/90 at: 930
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME								TOTAL MORTALITY	
%	00:00	01:00	02:15	05:10	29:10	53:10	74:10	98:25	%	
100	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 08900221

TEST CONC. %	ELAPSED TIME							
	00:00	01:00	02:15	05:10	29:10	53:10	74:10	98:25
100	pH		8.4					8.4
	O2 ppm		8.7					8.7
	Cond.		500					480
	Temp(C)		14.0					15.0
65	pH		8.1					8.4
	O2 ppm		8.6					8.7
	Cond.		650					640
	Temp(C)		14.0					15.0
40	pH		8.0					8.4
	O2 ppm		8.6					8.7
	Cond.		750					750
	Temp(C)		14.0					15.0
30	pH		7.9					8.4
	O2 ppm		8.7					8.7
	Cond.		800					790
	Temp(C)		14.0					15.0
10	pH		7.9					8.4
	O2 ppm		8.7					8.8
	Cond.		850					805
	Temp(C)		14.0					15.0
5	pH		7.9					8.5
	O2 ppm		9.0					8.9
	Cond.		850					805
	Temp(C)		14.0					15.0
Control	pH		7.7					8.3
	O2 ppm		8.6					9.2
	Cond.		850					690
	Temp(C)		14.0					15.0

COMPANY: Stepan Canada Inc., Longford Mills
(140004)
SECTOR: Organic Chemical
REGION: Central

SUMMARY

Data for six *Daphnia magna* acute lethality toxicity tests conducted on samples of combined effluent collected between October 1989 and March 1990 were submitted by Stepan Canada Inc. of Longford Mills.

Four of the six samples were not acutely lethal to *Daphnia*. The remaining two samples induced an unusual toxic response in which the greatest number of mortalities occurred in the middle concentrations of effluent.

combined effluent

08890443 sampled: 10/18/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

08890471 sampled: 11/15/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

08890491 sampled: 12/13/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

08900032 sampled: 01/17/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments:

08900112 sampled: 02/20/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

08900222 sampled: 03/21/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

process effluent

emergency overflow

Stepan Canada Inc. (continued)

rain gauge

intake water

TOXICITY TEST REPORT

Sample: 08890443

TEST CONDITIONS

Company : Stepan Canada Inc.
Longford Mills, ONT
(140004)
Region : Central
Industry : Organic Chemical
Control point : combined effluent, (100)
Laboratory : Integrated
Sampling Method : 24 HR. COMPOSITE
Sampled By : B. FREE
Date Collected : 10/18/89
Received : 10/19/89
Tested : 10/20/89 at: 1430
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:00	%
100	0	0	0	0	1	1	8
50	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0
15	0	0	0	0	1	1	8
5	0	0	0	0	1	2	16
Control	0	0	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 08890443

TEST CONC. %	ELAPSED TIME					
	00:00	01:00	02:00	04:00	24:00	48:00

100	pH	6.9				8.0
	O2 ppm	8.3				5.7
	Cond.	350				310
	Temp(C)	20.0				20.0
50	pH	7.0				7.9
	O2 ppm	8.5				5.5
	Cond.	314				307
	Temp(C)	20.0				20.0
25	pH	7.0				7.9
	O2 ppm	8.0				5.5
	Cond.	296				318
	Temp(C)	20.0				20.0
15	pH	7.0				7.8
	O2 ppm	8.8				4.8
	Cond.	288				319
	Temp(C)	20.0				20.0
5	pH	7.0				7.8
	O2 ppm	8.6				4.7
	Cond.	281				328
	Temp(C)	20.0				20.0
Control	pH	7.0				8.1
	O2 ppm	8.1				5.1
	Cond.	340				333
	Temp(C)	20.0				20.0

TOXICITY TEST REPORT

Sample: 08890471

TEST CONDITIONS

Company : Stepan Canada Inc.
Longford Mills, ONT
(140004)
Region : Central
Industry : Organic Chemical
Control point : combined effluent, (100)
Laboratory : Integrated
Sampling Method : 24 HR. COMPOSITE
Sampled By : W. JOHNSTON
Date Collected : 11/15/89
Received : 11/17/89
Tested : 11/17/89 at: 1445
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
	%	00:00	01:00	02:00	04:00	24:00 48:00	%
100	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 08890471

TEST CONC.	ELAPSED TIME					
	%	00:00	01:00	02:00	04:00	24:00 48:00
100	pH	7.5				8.0
	O2 ppm	9.7				9.2
	Cond.	1900				1990
	Temp(C)	19.0				19.0
50	pH	7.6				8.2
	O2 ppm	9.7				9.5
	Cond.	1061				1172
	Temp(C)	19.0				19.0
25	pH	7.6				8.2
	O2 ppm	9.7				9.7
	Cond.	590				820
	Temp(C)	19.0				19.0
15	pH	7.6				8.3
	O2 ppm	9.7				9.7
	Cond.	484				589
	Temp(C)	19.0				19.0
5	pH	7.6				8.3
	O2 ppm	9.8				9.8
	Cond.	319				422
	Temp(C)	19.0				19.0
Control	pH	7.6				8.4
	O2 ppm	9.7				9.8
	Cond.	280				290
	Temp(C)	19.0				19.0

MISA Daphnia

TOXICITY TEST REPORT

Sample: 08890491

TEST CONDITIONS

Company : Stepan Canada Inc.
 Longford Mills, ONT
 (140004)
 Region : Central
 Industry : Organic Chemical
 Control point : combined effluent, (100)
 Laboratory : Integrated
 Sampling Method : 24 hr composite
 Sampled By : W. JOHNSTON
 Date Collected : 12/13/89
 Received : 12/14/89
 Tested : 12/15/89 at: 1200

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY	
	%	00:00	01:00	02:00	04:00	24:00		47:45
100	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0
5	0	0	0	2	2	2	16	16
Control	0	0	0	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 08890491

TEST CONC. %	ELAPSED TIME					
	00:00	01:00	02:00	04:00	24:00	47:45

100	pH	7.8	7.6
	O2 ppm	7.6	6.8
	Cond.	450	525
	Temp(C)	20.0	20.0
50	pH	7.9	7.7
	O2 ppm	7.6	6.8
	Cond.	340	450
	Temp(C)	20.0	20.0
25	pH	7.8	7.7
	O2 ppm	7.6	7.0
	Cond.	320	360
	Temp(C)	20.0	20.0
15	pH	7.8	8.0
	O2 ppm	7.4	7.5
	Cond.	320	360
	Temp(C)	20.0	20.0
5	pH	7.8	8.2
	O2 ppm	7.6	6.8
	Cond.	290	400
	Temp(C)	20.0	20.0
Control	pH	7.7	7.7
	O2 ppm	7.2	7.0
	Cond.	290	425
	Temp(C)	20.0	20.0

TOXICITY TEST REPORT

Sample: 08900032

TEST CONDITIONS

Company : Stepan Canada Inc.
Longford Mills, ONT
(140004)
Region : Central
Industry : Organic Chemical
Control point : combined effluent, (100)
Laboratory : integrated
Sampling Method : 24hr composite
Sampled By : W. Johnston
Date Collected : 01/17/90
Received : 01/18/90
Tested : 01/18/90 at: 1315
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:15	03:25	04:15	24:25	48:15	%
100	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0
5	0	0	0	0	1	1	8
Control	0	0	0	0	1	1	8

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 08900032

TEST CONC.	ELAPSED TIME					
%	00:00	01:15	03:25	04:15	24:25	48:15

100	pH	8.3				8.2
	O2 ppm	6.4				5.2
	Cond.	590				560
	Temp(C)	20.0				20.0
50	pH	8.4				8.3
	O2 ppm	6.4				5.2
	Cond.	540				520
	Temp(C)	20.0				20.0
25	pH	8.5				8.4
	O2 ppm	7.4				6.1
	Cond.	540				510
	Temp(C)	20.0				20.0
15	pH	8.5				8.5
	O2 ppm	7.3				6.0
	Cond.	540				510
	Temp(C)	20.0				20.0
5	pH	8.5				8.5
	O2 ppm	7.4				6.0
	Cond.	540				510
	Temp(C)	20.0				20.0
Control	pH	8.5				8.6
	O2 ppm	7.4				6.0
	Cond.	540				510
	Temp(C)	20.0				20.0

TOXICITY TEST REPORT

Sample: 08900112

TEST CONDITIONS

Company : Stepan Canada Inc.
Longford Mills, ONT
(140004)
Region : Central
Industry : Organic Chemical
Control point : combined effluent, (100)
Laboratory : Integrated
Sampling Method : 24 hr composite
Sampled By : W Johnston
Date Collected : 02/20/90
Received : 02/23/90
Tested : 02/23/90 at: 1500
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E						TOTAL MORTALITY
	%	00:00	01:00	02:10	04:10	24:40 47:40	
100	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 08900112

TEST CONC.	E L A P S E D T I M E					
%	00:00	01:00	02:10	04:10	24:40	47:40

100	pH	7.9			7.8
	O2 ppm	7.7			6.6
	Cond.	450			460
	Temp(C)	21.0			20.0
50	pH	8.1			7.9
	O2 ppm	7.2			6.8
	Cond.	390			430
	Temp(C)	21.0			20.0
25	pH	8.1			7.9
	O2 ppm	7.2			6.9
	Cond.	390			390
	Temp(C)	21.0			20.0
15	pH	8.2			7.9
	O2 ppm	7.0			6.9
	Cond.	380			390
	Temp(C)	21.0			20.0
5	pH	8.2			7.9
	O2 ppm	7.1			6.7
	Cond.	360			380
	Temp(C)	21.0			20.0
Control	pH	8.2			7.8
	O2 ppm	6.9			7.8
	Cond.	325			365
	Temp(C)	21.0			20.0

TOXICITY TEST REPORT

Sample: 08900222

TEST CONDITIONS

Company : Stepan Canada Inc.
Longford Mills, ONT
(140004)
Region : Central
Industry : Organic Chemical
Control point : combined effluent, (100)
Laboratory : Integrated
Sampling Method : grab
Sampled By : R. Teeple
Date Collected : 03/21/90
Received : 03/22/90
Tested : 03/23/90 at: 1150
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	27:05	50:55	%
100	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 08900222

TEST CONC.	ELAPSED TIME					
%	00:00	01:00	02:00	04:00	27:05	50:55

100	pH	8.4	8.3
	O2 ppm	8.6	7.4
	Cond.	475	550
	Temp(C)	20.0	20.0
50	pH	8.3	8.3
	O2 ppm	8.6	7.3
	Cond.	525	575
	Temp(C)	20.0	20.0
25	pH	8.3	8.3
	O2 ppm	8.6	7.4
	Cond.	550	600
	Temp(C)	20.0	20.0
15	pH	8.3	8.3
	O2 ppm	8.7	7.3
	Cond.	600	640
	Temp(C)	20.0	20.0
5	pH	8.4	8.3
	O2 ppm	8.6	7.2
	Cond.	600	640
	Temp(C)	20.0	20.0
Control	pH	8.5	8.3
	O2 ppm	8.7	7.4
	Cond.	700	625
	Temp(C)	20.0	20.0

COMPANY: Uniroyal Chemical Ltd., Elmira
(680108)
SECTOR: Organic Chemical
REGION: West Central

SUMMARY

The data for twenty-two trout bioassays, conducted on combined effluent and once through cooling water samples collected between October 1989 and March 1990, were provided by Uniroyal Chemical Limited. Three of six samples collected from combined effluent 0600 had 96 hour LC50s of > 100 %. The other three samples were determined to have been non-acutely lethal. One of six samples collected from combined effluent 0800 had a 96 hour LC50 of > 100 %. The other five samples were non-acutely lethal. Two of six samples collected from the combined effluent 0900 had 96 hour LC50s of > 100 %. The other four samples were non-acutely lethal.

One of the four cooling water samples had a 96 hour LC50 of > 100 %, while the remaining were non-acutely lethal. All Ministry audit testing of samples collected from the four locations were determined to have been non-acutely lethal to test fish.

OT cooling water

OT cooling water

01890284 sampled: 12/06/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA audit sample.

03890374 sampled: 12/18/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900035 sampled: 01/15/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900129 sampled: 02/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900218 sampled: 03/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

Uniroyal Chemical Ltd. (continued)

OT cooling water

combined effluent

rain gauge

combined effluent

03890217 sampled: 10/16/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03890286 sampled: 11/20/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 > 100

01890281 sampled: 12/06/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA audit sample.

03890375 sampled: 12/18/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900036 sampled: 01/15/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900130 sampled: 02/19/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test--Lethal

03900217 sampled: 03/19/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50>100

combined effluent

combined effluent

03890218 sampled: 10/16/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03890287 sampled: 11/20/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 > 100

01890282 sampled: 12/06/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA audit sample.

Uniroyal Chemical Ltd. (continued)

03890376 sampled: 12/18/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900037 sampled: 01/15/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900127 sampled: 02/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; Non-lethal

03900219 sampled: 03/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Single Concentration Test; Non lethal

combined effluent

03890219 sampled: 10/16/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03890288 sampled: 11/20/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 > 100

01890283 sampled: 12/06/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA audit sample.

03890377 sampled: 12/18/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900038 sampled: 01/15/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

03900128 sampled: 02/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non-lethal

03900220 sampled: 03/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

Uniroyal Chemical Ltd. (continued)

intake water

TOXICITY TEST REPORT

Sample: 01890284

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
 Elmira, ONT
 (680108)
 Region : West Central
 Industry : Organic Chemical
 Control point : OT cooling water, (200)
 Laboratory : MOE
 Sampling Method : grab
 Sampled By : M. Smithson
 Date Collected : 12/06/89
 Received : 12/07/89
 Tested : 12/08/89 at: 1220
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E										TOTAL MORTALITY
	%	00:00	00:30	01:00	02:00	04:00	28:00	49:00	72:20	96:00	%
100	0	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA audit sample.

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01890284

TEST CONC. %	E L A P S E D T I M E										
		00:00	00:30	01:00	02:00	04:00	28:00	49:00	72:20	96:00	
100	pH			7.5		7.8		8.0	8.0	8.1	8.
	O2 ppm			8.2		9.8		10.5	9.8	9.7	10.
	Cond.			980		940		940	960	940	92
	Temp(C)			14.0		14.0		14.0	14.0	14.0	14.
65	pH				7.9		8.1	8.0	8.1		8.
	O2 ppm				9.8		10.9	9.9	9.7		10.
	Cond.				660		680	720	700		72
	Temp(C)				14.0		14.0	14.0	14.0		14.
40	pH				7.7		7.8	7.7	7.9		7.
	O2 ppm				9.7		10.4	9.5	9.6		10.
	Cond.				540		520	560	560		56
	Temp(C)				14.0		14.0	14.0	14.0		14.
30	pH				7.7		7.7	7.6	7.8		7.
	O2 ppm				9.5		10.1	9.1	9.5		10.
	Cond.				465		460	485	480		48
	Temp(C)				14.0		14.0	14.0	14.0		14.
20	pH				7.9		7.7	7.6	7.8		7.
	O2 ppm				10.0		10.7	9.3	9.4		10.
	Cond.				390		390	410	420		41
	Temp(C)				14.0		14.0	14.0	14.0		14.
10	pH				7.6		7.9	7.6	7.8		7.
	O2 ppm				9.3		10.5	9.5	9.5		10.
	Cond.				310		320	335	325		33
	Temp(C)				14.0		14.0	14.0	14.0		14.
Control	pH				7.7		7.8	7.6	7.8		7.
	O2 ppm				9.8		10.7	9.5	9.2		10.
	Cond.				250		255	260	260		26
	Temp(C)				14.0		14.0	14.0	14.0		14.

TOXICITY TEST REPORT

Sample: 03890374

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
 Elmira, ONT
 (680108)
 Region : West Central
 Industry : Organic Chemical
 Control point : OT cooling water, (200)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. Hallman/MS
 Date Collected : 12/18/89
 Received : 12/19/89
 Tested : 12/20/89 at: 900

Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY	
	%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	2	3	4		40
65	0	0	0	0	1		10
40	0	0	0	0	0		0
20	0	0	0	0	0		0
10	0	0	0	0	0		0
5	0	0	0	0	0		0
Control	0	0	0	0	0		0

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890374

TEST CONC.	ELAPSED TIME				
	%	00:00	24:00	48:00	72:00

100	pH	7.9				8.3
	O2 ppm	8.5				9.1
	Cond.	1024				1017
	Temp(C)	15.0	14.0	14.0	14.0	14.0
65	pH	7.8				8.2
	O2 ppm	8.1				8.8
	Cond.	874				880
	Temp(C)	15.0	14.0	14.0	14.0	14.0
40	pH	7.8				8.3
	O2 ppm	8.1				9.5
	Cond.	744				746
	Temp(C)	15.0	14.0	14.0	14.0	14.0
20	pH	7.8				8.3
	O2 ppm	8.0				9.6
	Cond.	649				654
	Temp(C)	15.0	14.0	14.0	14.0	14.0
10	pH	7.8				8.5
	O2 ppm	8.0				9.5
	Cond.	602				582
	Temp(C)		14.0	14.0	14.0	14.0
5	pH	7.8				8.5
	O2 ppm	8.0				9.8
	Cond.	577				581
	Temp(C)	15.0	14.0	14.0	14.0	14.0
Control	pH	7.8				8.5
	O2 ppm	8.1				9.9
	Cond.	555				556
	Temp(C)	15.0	14.0	14.0	14.0	14.0

TOXICITY TEST REPORT

Sample: 03900035

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
Elmira, ONT
(680108)
Region : West Central
Industry : Organic Chemical
Control point : OT cooling water, (200)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Hallman
Date Collected : 01/15/90
Received : 01/16/90
Tested : 01/17/90 at: 1800
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

TOXICITY TEST PARAMETERS

Sample Number: 03900035

TEST CONC. %	E L A P S E D T I M E				
	00:00	24:00	48:00	72:00	96:00

100	pH	7.8				7.9
	O2 ppm	9.6				8.9
	Cond.	2700				2260
	Temp(C)	15.0	15.0	14.0	14.0	14.5
65	pH	7.8				8.2
	O2 ppm	9.6				8.9
	Cond.	5320				1530
	Temp(C)	15.0	15.0	14.0	14.0	14.5
40	pH	7.9				8.2
	O2 ppm	9.5				9.2
	Cond.	1006				1000
	Temp(C)	15.0	15.0	14.0	14.0	14.5
20	pH	7.9				8.2
	O2 ppm	9.2				8.9
	Cond.	5490				5490
	Temp(C)	15.0	15.0	14.0	14.0	14.5
10	pH	7.9				8.2
	O2 ppm	9.0				8.5
	Cond.	3220				3230
	Temp(C)	15.0	15.0	14.0	14.0	14.5
5	pH	8.0				8.2
	O2 ppm	9.0				8.6
	Cond.	1787				1788
	Temp(C)	15.0	15.0	14.0	14.0	14.5
Control	pH	7.9				8.4
	O2 ppm	9.0				8.7
	Cond.	557				562
	Temp(C)	15.0	15.0	14.0	14.0	14.5

TOXICITY TEST REPORT

Sample: 03900129

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
 Elmira, ONT
 (680108)
 Region : West Central
 Industry : Organic Chemical
 Control point : OT cooling water, (200)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. Hallman
 Date Collected : 02/19/90
 Received : 02/20/90
 Tested : 02/21/90 at: 1100
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900129

TEST CONC. %	ELAPSED TIME				
	00:00	24:00	48:00	72:00	96:00
100	pH 8.0				8.4
	O2 ppm 10.2				10.2
	Cond. 1211				1180
	Temp(C) 15.0	14.0	14.5	14.0	14.0
65	pH 8.0				8.2
	O2 ppm 9.8				10.0
	Cond. 982				946
	Temp(C) 15.0	14.0	14.5	14.0	14.0
40	pH 8.0				8.4
	O2 ppm 9.6				10.2
	Cond. 816				763
	Temp(C) 15.0	14.0	14.5	14.0	14.0
20	pH 7.9				8.4
	O2 ppm 9.4				10.2
	Cond. 683				655
	Temp(C) 15.0	14.0	14.5	14.0	14.0
10	pH 7.9				8.5
	O2 ppm 9.2				10.2
	Cond. 606				579
	Temp(C) 15.0	14.0	14.5	14.0	14.0
5	pH 7.9				8.4
	O2 ppm 9.1				10.0
	Cond. 579				568
	Temp(C) 15.0	14.0	14.5	14.0	14.0
Control	pH 7.9				8.5
	O2 ppm 8.9				10.2
	Cond. 546				520
	Temp(C) 15.0	14.0	14.5	14.0	14.0

TOXICITY TEST REPORT

Sample: 03900218

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
 Elmira, ONT
 (680108)
 Region : West Central
 Industry : Organic Chemical
 Control point : OT cooling water, (200)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. Hallman
 Date Collected : 03/19/90
 Received : 03/20/90
 Tested : 03/21/90 at: 1135
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY	
	%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900218

TEST CONC. %	E L A P S E D T I M E					
		00:00	24:00	48:00	72:00	96:00
100	pH	7.8				7.9
	O2 ppm	9.8				9.9
	Cond.	1045				1021
	Temp(C)	15.0	14.5	14.5	14.5	14.5
65	pH	7.9				8.4
	O2 ppm	9.3				9.9
	Cond.	886				855
	Temp(C)	15.0	14.5	14.5	14.5	14.5
40	pH	7.9				8.4
	O2 ppm	9.2				9.7
	Cond.	761				737
	Temp(C)	15.0	14.5	14.5	14.5	14.5
20	pH	7.9				8.4
	O2 ppm	8.8				9.7
	Cond.	656				652
	Temp(C)	15.0	14.5	14.5	14.5	14.5
10	pH	7.9				8.4
	O2 ppm	8.7				9.6
	Cond.	602				599
	Temp(C)	15.0	14.5	14.5	14.5	14.5
5	pH	7.9				8.4
	O2 ppm	8.6				9.6
	Cond.	576				567
	Temp(C)	15.0	14.5	14.5	14.5	14.5
Control	pH	7.9				8.4
	O2 ppm	8.5				9.4
	Cond.	549				547
	Temp(C)	15.0	14.5	14.5	14.5	14.5

TOXICITY TEST REPORT

Sample: 03890217

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
 Elmira, ONT
 (680108)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (600)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : B. Miller
 Date Collected : 10/16/89
 Received : 10/17/89
 Tested : 10/18/89 at: 1130
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :TOXICITY TEST PARAMETERS

Sample Number: 03890217

TEST CONC.	ELAPSED TIME						
%	00:00	04:00	24:00	48:00	72:00	96:00	

Control	pH	7.8					8.5
	O2 ppm	8.7					9.3
	Cond.	571					554
	Temp(C)	15.0	15.0	14.0	14.5	14.5	15.0
10	pH	7.8					8.5
	O2 ppm	8.9					9.4
	Cond.	616					602
	Temp(C)	15.0	15.0	14.0	14.5	14.5	15.0
20	pH	7.8					8.4
	O2 ppm	8.9					9.2
	Cond.	659					648
	Temp(C)	15.0	15.0	14.0	14.5	14.5	15.0
40	pH	7.8					8.4
	O2 ppm	9.1					9.2
	Cond.	743					729
	Temp(C)	15.0	15.0	14.0	14.5	14.5	15.0
65	pH	7.8					8.5
	O2 ppm	9.4					9.3
	Cond.	846					829
	Temp(C)	15.0	15.0	14.0	14.5	14.5	15.0
100	pH	7.9					8.5
	O2 ppm	9.9					9.6
	Cond.	984					967
	Temp(C)	15.0	15.0	14.0	14.5	14.5	15.0

MISA Trout

TOXICITY TEST REPORT

Sample: 03890286

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
 Elmira, ONT
 (680108)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (600)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : B. Miller
 Date Collected : 11/20/89
 Received : 11/21/89
 Tested : 11/23/89 at: 1330

Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E						TOTAL MORTALITY
	%	00:00	04:00	24:00	48:00	72:00	96:00
Control	0	0	0	0	0	0	10
10	0	0	0	0	0	0	10
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 > 100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890286

TEST CONC. %		E L A P S E D T I M E					
		00:00	04:00	24:00	48:00	72:00	96:00
Control	pH	7.9					8.5
	O2 ppm	9.4					9.5
	Cond.	560					569
	Temp(C)	14.5	14.5	14.5	14.5	14.5	14.5
10	pH	7.8					8.7
	O2 ppm	9.1					9.6
	Cond.	612					607
	Temp(C)	14.5	14.5	14.5	14.5	14.5	14.5
20	pH	7.9					8.6
	O2 ppm	9.2					9.6
	Cond.	664					657
	Temp(C)	14.5	14.5	14.5	14.5	14.5	14.5
40	pH	8.0					8.7
	O2 ppm	9.3					9.6
	Cond.	753					755
	Temp(C)	14.5	14.5	14.5	14.5	14.5	14.5
65	pH	7.9					8.6
	O2 ppm	9.6					9.6
	Cond.	880					879
	Temp(C)	14.5	14.5	14.5	14.5	14.5	14.5
100	pH	8.0					8.5
	O2 ppm	9.7					9.2
	Cond.	1050					1048
	Temp(C)	14.5	14.5	14.5	14.5	14.5	14.5

TOXICITY TEST REPORT

Sample: 01890281

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
 Elmira, ONT
 (680108)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (600)
 Laboratory : MOE
 Sampling Method : grab
 Sampled By : M. Smithson
 Date Collected : 12/06/89
 Received : 12/07/89
 Tested : 12/08/89 at: 1220
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME										TOTAL MORTALITY
%	00:00	00:30	01:00	02:00	04:00	27:20	48:30	69:20	96:00	%	
100	0	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA audit sample.

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01890281

TEST CONC. %	ELAPSED TIME									
	00:00	00:30	01:00	02:00	04:00	27:20	48:30	69:20	96:00	
100	pH	7.5	8.0			8.2	8.0	8.1	8.	
	O2 ppm	9.2	9.9			10.8	10.1	9.6	10.	
	Cond.	720	720			700	720	700	72	
	Temp(C)	14.0	14.0			14.0	14.0	14.0	14.	
65	pH		7.7			7.9	7.8	7.9	7.	
	O2 ppm		9.4			10.6	9.9	8.9	10.	
	Cond.		580			540	580	580	58	
	Temp(C)		14.0			14.0	14.0	14.0	14.	
40	pH		7.9			7.9	7.8	7.5	7.	
	O2 ppm		9.9			10.9	10.0	9.5	10.	
	Cond.		455			450	455	460	46	
	Temp(C)		14.0			14.0	14.0	14.0	14.	
30	pH		7.9			7.8	7.7	7.9	7.	
	O2 ppm		9.9			10.9	9.9	9.5	10.	
	Cond.		400			405	405	410	40	
	Temp(C)		14.0			14.0	14.0	14.0	14.	
20	pH		7.9			7.5	7.3	7.4	7.	
	O2 ppm		9.9			9.7	8.8	8.6	9.	
	Cond.		355			355	365	360	36	
	Temp(C)		14.0			14.0	14.0	14.0	14.	
10	pH		7.9			7.8	7.7	7.7	7.	
	O2 ppm		9.9			10.5	9.9	9.6	10.	
	Cond.		310			300	320	310	31	
	Temp(C)		14.0			14.0	14.0	14.0	14.	
Control	pH		7.8			7.8	7.4	7.2	7.	
	O2 ppm		9.8			10.9	9.8	9.5	10.	
	Cond.		255			255	260	260	26	
	Temp(C)		14.0			14.0	14.0	14.0	14.	

TOXICITY TEST REPORT

Sample: 03890375

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
 Elmira, ONT
 (680108)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (600)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. Hallman/MS
 Date Collected : 12/18/89
 Received : 12/19/89
 Tested : 12/20/89 at: 900

Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY	
	%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890375

TEST CONC. %	ELAPSED TIME				
	00:00	24:00	48:00	72:00	96:00

100	pH	7.9				8.4
	O2 ppm	9.2				10.0
	Cond.	1056				1028
	Temp(C)	15.0	14.0	14.0	14.0	14.0
65	pH	7.8				8.4
	O2 ppm	8.8				10.2
	Cond.	879				850
	Temp(C)	15.0	14.0	14.0	14.0	14.0
40	pH	7.8				8.3
	O2 ppm	8.3				9.9
	Cond.	757				738
	Temp(C)	15.0	14.0	14.0	14.0	14.0
20	pH	7.8				8.5
	O2 ppm	8.0				10.2
	Cond.	657				657
	Temp(C)	15.0	14.0	14.0	14.0	14.0
10	pH	7.8				8.5
	O2 ppm	8.1				10.2
	Cond.	610				578
	Temp(C)	15.0	14.0	14.0	14.0	14.0
5	pH	7.8				8.5
	O2 ppm	8.0				10.1
	Cond.	588				580
	Temp(C)	15.0	14.0	14.0	14.0	14.0
Control	pH	7.8				8.5
	O2 ppm	8.0				10.2
	Cond.	556				546
	Temp(C)	15.0	14.0	14.0	14.0	14.0

TOXICITY TEST REPORT

Sample: 03900036

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
 Elmira, ONT
 (680108)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (600)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. Hallman
 Date Collected : 01/15/90
 Received : 01/16/90
 Tested : 01/17/90 at: 1200
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
	%	00:00	24:00	48:00	72:00	
100	0	0	0	0	0	0
Control	0	0	0	0	2	10

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900036

TEST CONC.	%	ELAPSED TIME				
		00:00	24:00	48:00	72:00	96:00
100	pH	7.8				8.3
	O2 ppm	9.7				9.0
	Cond.	1035				1024
	Temp(C)	15.0	15.0	15.0	14.0	14.5
Control	pH	7.9				8.4
	O2 ppm	8.7				8.7
	Cond.	560				575
	Temp(C)	15.0	15.0	15.0	14.0	14.5

MISA Trout

TOXICITY TEST REPORT

Sample: 03900130

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
 Elmira, ONT
 (680108)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (600)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. Hallman
 Date Collected : 02/19/90
 Received : 02/20/90
 Tested : 02/21/90 at: 1130
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
	%	00:00	24:00	48:00	72:00	96:00
100	0	4	6	8	8	80
100	0	6	8	10	10	100
65	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test--Lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900130

TEST CONC. %	E L A P S E D T I M E				
	00:00	24:00	48:00	72:00	96:00

100	pH	8.1	8.3		
	O2 ppm	8.4	9.8		
	Cond.	786	791		
	Temp(C)	14.0	14.5	14.5	14.0
100	pH	8.1	8.2		
	O2 ppm	8.4	9.6		
	Cond.	786	789		
	Temp(C)	14.0	14.5	14.5	
65	pH	8.0			8.2
	O2 ppm	8.3			8.9
	Cond.	698			701
	Temp(C)	14.0	14.5	14.5	14.0
Control	pH	7.9			8.5
	O2 ppm	8.7			10.1
	Cond.	544			528
	Temp(C)	14.0	14.5	14.5	14.0
Control	pH	7.9			8.5
	O2 ppm	8.7			10.1
	Cond.	544			532
	Temp(C)	14.0	14.5	14.5	14.0

TOXICITY TEST REPORT

Sample: 03900217

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
 Elmira, ONT
 (680108)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (600)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. Hallman
 Date Collected : 03/19/90
 Received : 03/20/90
 Tested : 03/21/90 at: 1135
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	2	2	20
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50>100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900217

TEST CONC. %	ELAPSED TIME				
	00:00	24:00	48:00	72:00	96:00

100	pH	7.9				8.3
	O2 ppm	9.1				9.7
	Cond.	840				949
	Temp(C)	15.0	14.5	14.5	14.5	14.5
65	pH	7.9				8.3
	O2 ppm	8.7				9.7
	Cond.	746				810
	Temp(C)	15.0	14.5	14.5	14.5	14.5
40	pH	7.9				8.3
	O2 ppm	8.5				9.7
	Cond.	648				681
	Temp(C)	15.0	14.5	14.5	14.5	14.5
20	pH	7.9				8.4
	O2 ppm	8.1				9.5
	Cond.	603				625
	Temp(C)	15.0	14.5	14.5	14.5	14.5
10	pH	7.9				8.4
	O2 ppm	8.0				8.8
	Cond.	591				589
	Temp(C)	15.0	14.5	14.5	14.5	14.5
5	pH	7.9				8.5
	O2 ppm	8.0				9.7
	Cond.	567				562
	Temp(C)	15.0	14.5	14.5	14.5	14.5
Control	pH	7.8				8.4
	O2 ppm	8.1				9.7
	Cond.	544				540
	Temp(C)	15.0	14.5	14.5	14.5	14.5

TOXICITY TEST REPORT

Sample: 03890218

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
 Elmira, ONT
 (680108)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (800)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : B. Miller
 Date Collected : 10/16/89
 Received : 10/17/89
 Tested : 10/18/89 at: 1130
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E						TOTAL MORTALITY
	%	00:00	04:00	24:00	48:00	72:00	96:00
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890218

TEST CONC. %	E L A P S E D T I M E					
		00:00	04:00	24:00	48:00	72:00
Control	pH	7.8				8.4
	O2 ppm	8.8				9.3
	Cond.	572				560
	Temp(C)	15.0	15.0	14.0	14.5	14.5
10	pH	7.8				8.4
	O2 ppm	8.9				9.2
	Cond.	634				619
	Temp(C)	15.0	15.0	14.0	14.5	14.5
20	pH	7.8				8.3
	O2 ppm	8.8				9.1
	Cond.	693				680
	Temp(C)	15.0	15.0	14.0	14.5	14.5
40	pH	7.8				8.4
	O2 ppm	8.9				9.2
	Cond.	800				791
	Temp(C)	15.0	15.0	14.0	14.5	14.5
65	pH	7.8				8.4
	O2 ppm	9.1				9.2
	Cond.	941				932
	Temp(C)	15.0	15.0	14.0	14.5	14.5
100	pH	7.9				8.3
	O2 ppm	9.5				9.2
	Cond.	1134				1126
	Temp(C)	15.0	15.0	14.0	14.5	14.5

TOXICITY TEST REPORT

Sample: 03890287

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
 Elmira, ONT
 (680108)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (800)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : B. Miller
 Date Collected : 11/20/89
 Received : 11/21/89
 Tested : 11/23/89 at: 1330

Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E						TOTAL MORTALITY
	%	00:00	04:00	24:00	48:00	72:00	96:00
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	10
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 > 100

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890287

TEST CONC. %	E L A P S E D T I M E						
	00:00	04:00	24:00	48:00	72:00	96:00	

Control	pH	7.8					8.5
	O2 ppm	9.2					9.6
	Cond.	567					570
	Temp(C)	14.0	14.5	14.5	14.5	14.5	14.5
10	pH	7.9					8.4
	O2 ppm	9.1					9.2
	Cond.	654					655
	Temp(C)	14.0	14.5	14.5	14.5	14.5	14.5
20	pH	7.9					8.6
	O2 ppm	9.2					9.5
	Cond.	742					741
	Temp(C)	14.0	14.5	14.5	14.5	14.5	14.5
40	pH	8.0					8.7
	O2 ppm	9.5					9.6
	Cond.	922					921
	Temp(C)	14.0	14.5	14.5	14.5	14.5	14.5
65	pH	8.0					8.5
	O2 ppm	9.4					9.4
	Cond.	1142					1149
	Temp(C)	14.0	14.5	14.5	14.5	14.5	14.5
100	pH	8.1					8.4
	O2 ppm	9.6					9.4
	Cond.	1452					1458
	Temp(C)	14.0	14.5	14.5	14.5	14.5	14.5

MISA Trout

TOXICITY TEST REPORT

Sample: 01890282

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
 Elmira, ONT
 (680108)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (800)
 Laboratory : MOE
 Sampling Method : grab
 Sampled By : M. Smithson
 Date Collected : 12/06/89
 Received : 12/07/89
 Tested : 12/08/89 at: 1220
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME										TOTAL MORTALITY %
	%	00:00	00:30	01:00	02:00	04:00	28:00	49:20	69:00	96:00	
100	0	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA audit sample.

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01890282

TEST CONC. %	ELAPSED TIME									
		00:00	00:30	01:00	02:00	04:00	28:00	49:20	69:00	96:00
100	pH				7.2	7.7	7.8	7.7	7.9	7.
	O2 ppm				7.9	9.7	10.2	8.6	8.9	10.
	Cond.				1000	1000	980	1000	1000	100
	Temp(C)				14.0	14.0	14.0	14.0	14.0	14.
65	pH					7.8	7.9	7.9	8.0	7.
	O2 ppm					9.6	10.7	9.7	9.1	10.
	Cond.					720	700	760	740	72
	Temp(C)					14.0	14.0	14.0	14.0	14.
40	pH					7.9	8.0	7.9	7.9	8.
	O2 ppm					9.8	10.9	9.8	9.6	10.
	Cond.					560	560	580	560	58
	Temp(C)					14.0	14.0	14.0	14.0	14.
30	pH					7.7	7.9	7.6	7.7	7.
	O2 ppm					9.3	10.3	9.4	9.0	10.
	Cond.					460	480	500	495	49
	Temp(C)					14.0	14.0	14.0	14.0	14.
20	pH					7.8	7.9	7.6	7.8	7.
	O2 ppm					9.8	10.6	10.2	9.5	10.
	Cond.					400	390	415	410	41
	Temp(C)					14.0	14.0	14.0	14.0	14.
10	pH					7.8	7.9	7.8	7.9	7.
	O2 ppm					9.8	10.5	10.0	9.6	10.
	Cond.					325	340	350	340	35
	Temp(C)					14.0	14.0	14.0	14.0	14.
Control	pH					7.6	7.7	7.6	7.7	7.
	O2 ppm					9.7	10.9	9.8	9.5	10.
	Cond.					250	250	265	260	26
	Temp(C)					14.0	14.0	14.0	14.0	14.

TOXICITY TEST REPORT

Sample: 03890376

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
 Elmira, ONT
 (680108)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (800)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. Hallman/MS
 Date Collected : 12/18/89
 Received : 12/19/89
 Tested : 12/20/89 at: 900
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY	
	%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890376

TEST CONC.	E L A P S E D T I M E				
	%	00:00	24:00	48:00	72:00

100	pH	8.0				8.5
	O2 ppm	9.2				10.1
	Cond.	1255				1251
	Temp(C)	15.0	14.0	14.0	14.0	14.0
65	pH	7.9				8.5
	O2 ppm	8.6				10.1
	Cond.	1019				1010
	Temp(C)	15.0	14.0	14.0	14.0	14.0
40	pH	7.9				8.5
	O2 ppm	7.9				9.9
	Cond.	832				828
	Temp(C)	15.0	14.0	14.0	14.0	14.0
20	pH	7.8				8.9
	O2 ppm	7.7				10.0
	Cond.	704				693
	Temp(C)	15.0	14.0	14.0	14.0	14.0
10	pH	7.8				8.5
	O2 ppm	7.5				10.2
	Cond.	626				619
	Temp(C)	15.0	14.0	14.0	14.0	14.0
5	pH	7.8				8.5
	O2 ppm	7.3				10.0
	Cond.	588				586
	Temp(C)	15.0	14.0	14.0	14.0	14.0
Control	pH	7.8				8.5
	O2 ppm	7.5				10.0
	Cond.	558				557
	Temp(C)	15.0	14.0	14.0	14.0	14.0

MISA Trout

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST REPORT

Sample: 03900037

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
Elmira, ONT
(680108)
Region : West Central
Industry : Organic Chemical
Control point : combined effluent, (800)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Hallman
Date Collected : 01/15/90
Received : 01/16/90
Tested : 01/17/90 at: 1200
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal
95% fid. limits : 0.0 - 0.0 %
Comments : Non-lethal

TOXICITY TEST PARAMETERS

Sample Number: 03900037

TEST CONC. %	E L A P S E D T I M E				
	00:00	24:00	48:00	72:00	96:00

100	pH	7.9			8.3	
	O2 ppm	9.0			9.0	
	Cond.	1547			1563	
	Temp(C)	15.0	15.0	15.0	14.0	14.5
Control	pH	7.9			8.5	
	O2 ppm	8.7			9.2	
	Cond.	560			562	
	Temp(C)	15.0	15.0	15.0	14.0	14.5

TOXICITY TEST REPORT

Sample: 03900127

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
 Elmira, ONT
 (680108)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (800)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. Hallman
 Date Collected : 02/19/90
 Received : 02/20/90
 Tested : 02/21/90 at: 1130
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0
100	0	0	0	0	0	0
Control	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test; Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900127

TEST CONC. %	E L A P S E D T I M E				
	00:00	24:00	48:00	72:00	96:00
100	pH 7.9				8.4
	O2 ppm 9.8				9.9
	Cond. 1190				1186
	Temp(C) 14.0	14.0	14.5	14.5	14.0
100	pH 7.9				8.3
	O2 ppm 9.8				9.8
	Cond. 1190				1196
	Temp(C) 14.0	14.0	14.5	14.5	14.0
Control	pH 7.9				8.4
	O2 ppm 8.7				9.8
	Cond. 541				529
	Temp(C) 14.0	14.0	14.5	14.5	14.0
Control	pH 7.9				8.5
	O2 ppm 8.7				10.0
	Cond. 541				527
	Temp(C) 14.0	14.0	14.5	14.5	14.0

TOXICITY TEST REPORT

Sample: 03900219

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
Elmira, ONT
(680108)
Region : West Central
Industry : Organic Chemical
Control point : combined effluent, (800)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Hallman
Date Collected : 03/19/90
Received : 03/20/90
Tested : 03/21/90 at: 1140
Type of Bioassay : STATIC
(Protocol to determine the acute lethality
of liquid effluents to fish. OME, 1983).
Test Animal : Rainbow trout
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY	
	%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Single Concentration Test; Non lethal

TOXICITY TEST PARAMETERS

Sample Number: 03900219

TEST CONC. %	E L A P S E D T I M E					
		00:00	24:00	48:00	72:00	96:00
100	pH	7.9				8.3
	O2 ppm	9.9				9.7
	Cond.	1354				1356
	Temp(C)	15.0	14.5	14.5	14.5	14.5
100	pH	7.9				8.3
	O2 ppm	9.9				9.5
	Cond.	1354				1356
	Temp(C)	15.0	14.5	14.5	14.5	14.5
Control	pH	7.9				8.4
	O2 ppm	9.1				9.7
	Cond.	551				546
	Temp(C)	15.0	14.5	14.5	14.5	14.5
Control	pH	7.9				8.4
	O2 ppm	9.1				9.6
	Cond.	551				546
	Temp(C)	15.0	14.5	14.5	14.5	14.5

TOXICITY TEST REPORT

Sample: 03890219

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
 Elmira, ONT
 (680108)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (900)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : B. Miller
 Date Collected : 10/16/89
 Received : 10/17/89
 Tested : 10/18/89 at: 1130
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :TOXICITY TEST PARAMETERS

Sample Number: 03890219

TEST CONC. %	ELAPSED TIME					
	00:00	04:00	24:00	48:00	72:00	96:00
Control	pH 7.8 O2 ppm 8.6 Cond. 572 Temp(C) 15.0	15.0	14.0	14.5	14.5	8.5 9.4 553 15.0
10	pH 7.8 O2 ppm 8.4 Cond. 606 Temp(C) 15.0	15.0	14.0	14.5	14.5	8.4 9.2 595 15.0
20	pH 7.8 O2 ppm 8.5 Cond. 642 Temp(C) 15.0	15.0	14.0	14.5	14.5	8.4 9.2 630 15.0
40	pH 8.0 O2 ppm 8.7 Cond. 709 Temp(C) 15.0	15.0	14.0	14.5	14.5	8.4 9.4 698 15.0
65	pH 8.3 O2 ppm 8.8 Cond. 793 Temp(C) 15.0	15.0	14.0	14.5	14.5	8.4 9.3 788 15.0
100	pH 8.6 O2 ppm 8.9 Cond. 901 Temp(C) 15.0	15.0	14.0	14.5	14.5	8.1 7.6 913 15.0

MISA Trout

TOXICITY TEST REPORT

Sample: 03890288

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
 Elmira, ONT
 (680108)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (900)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : B. Miller
 Date Collected : 11/20/89
 Received : 11/21/89
 Tested : 11/23/89 at: 1330
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E						TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	72:00	96:00	%
Control	0	0	0	0	0	1	10
10	0	0	0	0	0	1	10
20	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 > 100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890288

TEST CONC. %	E L A P S E D T I M E					
	00:00	04:00	24:00	48:00	72:00	96:00
Control	pH 7.8 O2 ppm 9.2 Cond. 562 Temp(C) 14.5		14.5	14.5	14.5	14.5
10	pH 7.9 O2 ppm 9.1 Cond. 629 Temp(C) 14.5		14.5	14.5	14.5	14.5
20	pH 7.9 O2 ppm 9.1 Cond. 703 Temp(C) 14.5		14.5	14.5	14.5	14.5
40	pH 8.0 O2 ppm 9.0 Cond. 848 Temp(C) 14.5		14.5	14.5	14.5	14.5
65	pH 8.0 O2 ppm 9.0 Cond. 1021 Temp(C) 14.5		14.5	14.5	14.5	14.5
100	pH 8.2 O2 ppm 9.1 Cond. 1254 Temp(C) 14.5		14.5	14.5	14.5	14.5

TOXICITY TEST REPORT

Sample: 01890283

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
 Elmira, ONT
 (680108)

Region : West Central
 Industry : Organic Chemical

Control point : combined effluent, (900)

Laboratory : MOE
 Sampling Method : grab
 Sampled By : M. Smithson
 Date Collected : 12/06/89
 Received : 12/07/89
 Tested : 12/08/89 at: 1220

Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME										TOTAL MORTALITY
%	00:00	00:30	01:00	02:00	04:00	28:00	49:20	71:00	96:00	%	
100	0	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA audit sample.

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 01890283

TEST CONC. %	ELAPSED TIME									
	00:00	00:30	01:00	02:00	04:00	28:00	49:20	71:00	96:00	
100	pH	8.0		8.1		7.7	7.5	7.7	7.	
	O2 ppm	7.0		9.3		9.3	7.8	8.3	8.	
	Cond.	640		620		620	660	640	66	
	Temp(C)	14.0		14.0		14.0	14.0	14.0	14.	
65	pH			8.1		7.8	7.7	7.9	7.	
	O2 ppm			9.7		10.5	9.1	9.3	10.	
	Cond.			500		520	540	520	52	
	Temp(C)			14.0		14.0	14.0	14.0	14.	
40	pH			8.0		7.6	7.4	7.6	7.	
	O2 ppm			9.8		9.6	7.6	7.9	10.	
	Cond.			415		430	440	435	43	
	Temp(C)			14.0		14.0	14.0	14.0	14.	
30	pH			7.9		8.0	7.8	8.0	8.	
	O2 ppm			9.8		10.9	9.7	9.5	10.	
	Cond.			385		390	400	395	39	
	Temp(C)			14.0		14.0	14.0	14.0	14.	
20	pH			7.9		7.6	7.4	7.6	7.	
	O2 ppm			9.8		10.2	8.8	9.0	10.	
	Cond.			330		340	350	345	35	
	Temp(C)			14.0		14.0	14.0	14.0	14.	
10	pH			7.9		7.8	7.7	7.9	7.	
	O2 ppm			9.9		10.8	9.6	9.5	10.	
	Cond.			280		300	310	300	30	
	Temp(C)			14.0		14.0	14.0	14.0	14.	
Control	pH			7.9		7.7	7.5	7.4	7.	
	O2 ppm			9.8		10.3	9.0	8.6	9.	
	Cond.			245		260	270	270	26	
	Temp(C)			14.0		14.0	14.0	14.0	14.	

TOXICITY TEST REPORT

Sample: 03890377

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
 Elmira, ONT
 (680108)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (900)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. Hallman/MS
 Date Collected : 12/18/89
 Received : 12/19/89
 Tested : 12/20/89 at: 900
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY	
	%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890377

TEST CONC. %	ELAPSED TIME				
	00:00	24:00	48:00	72:00	96:00

100	pH	8.3				8.3
	O2 ppm	8.7				9.8
	Cond.	594				598
	Temp(C)	15.0	14.0	14.0	14.0	14.0
65	pH	8.1				8.4
	O2 ppm	8.3				9.6
	Cond.	588				593
	Temp(C)	15.0	14.0	14.0	14.0	14.0
40	pH	8.1				8.4
	O2 ppm	8.2				9.8
	Cond.	568				578
	Temp(C)	15.0	14.0	14.0	14.0	14.0
20	pH	7.8				8.5
	O2 ppm	7.9				9.5
	Cond.	565				572
	Temp(C)	15.0	14.0	14.0	14.0	14.0
10	pH	7.8				8.4
	O2 ppm	7.9				9.3
	Cond.	560				570
	Temp(C)	15.0	14.0	14.0	14.0	14.0
5	pH	7.8				8.5
	O2 ppm	7.9				9.5
	Cond.	558				567
	Temp(C)	15.0	14.0	14.0	14.0	14.0
Control	pH	7.8				8.5
	O2 ppm	7.4				9.5
	Cond.	557				559
	Temp(C)	15.0	14.0	14.0	14.0	14.0

TOXICITY TEST REPORT

Sample: 03900038

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
 Elmira, ONT
 (680108)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (900)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. Hallman
 Date Collected : 01/15/90
 Received : 01/16/90
 Tested : 01/17/90 at: 1200

Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).

Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY
	%	00:00	24:00	48:00	72:00	
100	0	0	0	1	6	30
Control	0	0	0	0	0	0

96 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900038

TEST CONC. %	E L A P S E D T I M E					
	00:00	24:00	48:00	72:00	96:00	
100	pH	8.5			8.1	
	O2 ppm	8.6			9.1	
	Cond.	395			408	
	Temp(C)	15.0	15.0	14.0	14.0	14.5
Control	pH	7.8			8.5	
	O2 ppm	8.7			9.2	
	Cond.	560			576	
	Temp(C)	15.0	15.0	14.0	14.0	14.5

TOXICITY TEST REPORT

Sample: 03900128

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
 Elmira, ONT
 (680108)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (900)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. Hallman
 Date Collected : 02/19/90
 Received : 02/20/90
 Tested : 02/21/90 at: 1130
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. OME, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME					TOTAL MORTALITY %
	%	00:00	24:00	48:00	72:00	96:00
100	0	0	0	0	0	0
65	0	0	0	0	0	0
40	0	0	0	0	0	0
20	0	0	0	0	0	0
10	0	0	0	0	0	0
5	0	0	0	0	0	0
Control	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non-lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900128

TEST CONC. %	ELAPSED TIME				
	00:00	24:00	48:00	72:00	96:00

100	pH	8.3				8.3
	O2 ppm	10.3				9.9
	Cond.	2330				2310
	Temp(C)	15.0	14.0	14.5	14.0	14.0
65	pH	8.1				8.3
	O2 ppm	9.8				10.0
	Cond.	1725				1715
	Temp(C)	15.0	14.0	14.5	14.0	14.0
40	pH	8.0				8.5
	O2 ppm	9.4				10.2
	Cond.	1279				1277
	Temp(C)	15.0	14.0	14.5	14.0	14.0
20	pH	8.0				8.5
	O2 ppm	9.0				10.2
	Cond.	918				915
	Temp(C)	15.0	14.0	14.5	14.0	14.0
10	pH	7.9				8.4
	O2 ppm	8.7				9.8
	Cond.	730				724
	Temp(C)	15.0	14.0	14.5	14.0	14.0
5	pH	7.9				8.5
	O2 ppm	8.4				10.1
	Cond.	634				639
	Temp(C)	15.0	14.0	14.5	14.0	14.0
Control	pH	7.9				8.4
	O2 ppm	7.7				10.1
	Cond.	543				523
	Temp(C)	15.0	14.0	14.5	14.0	14.0

TOXICITY TEST REPORT

Sample: 03900220

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
 Elmira, ONT
 (680108)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (900)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. Hallman
 Date Collected : 03/19/90
 Received : 03/20/90
 Tested : 03/21/90 at: 1215
 Type of Bioassay : STATIC
 (Protocol to determine the acute lethality
 of liquid effluents to fish. ONE, 1983).
 Test Animal : Rainbow trout
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E					TOTAL MORTALITY	
	%	00:00	24:00	48:00	72:00	96:00	%
100	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0

96 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900220

TEST CONC.	E L A P S E D T I M E				
	%	00:00	24:00	48:00	72:00

100	pH	8.1				8.3
	O2 ppm	9.9				9.9
	Cond.	1796				1922
	Temp(C)	15.0	14.5	14.5	14.5	14.5
65	pH	8.0				8.4
	O2 ppm	9.6				9.9
	Cond.	1373				1387
	Temp(C)	15.0	14.5	14.5	14.5	14.5
40	pH	7.9				8.4
	O2 ppm	9.4				9.8
	Cond.	1058				1068
	Temp(C)	15.0	14.5	14.5	14.5	14.5
20	pH	7.9				8.4
	O2 ppm	9.5				9.9
	Cond.	802				818
	Temp(C)	15.0	14.5	14.5	14.5	14.5
10	pH	7.9				8.3
	O2 ppm	9.6				9.6
	Cond.	676				686
	Temp(C)	15.0	14.5	14.5	14.5	14.5
5	pH	7.9				8.5
	O2 ppm	9.5				9.9
	Cond.	614				619
	Temp(C)	15.0	14.5	14.5	14.5	14.5
Control	pH	7.9				8.5
	O2 ppm	9.6				9.8
	Cond.	552				549
	Temp(C)	15.0	14.5	14.5	14.5	14.5

COMPANY: Uniroyal Chemical Ltd., Elmira
(680108)
SECTOR: Organic Chemical
REGION: West Central

SUMMARY

Data for 24 *Daphnia magna* acute lethality toxicity tests conducted on samples of effluent collected between October 1989 and March 1990 were submitted by Uniroyal Chemical Ltd. of Elmira.

One sample of once through cooling water was toxic to *Daphnia* with a 48 h LC50 = 33.2%. The remaining three samples submitted by the company had only one neonate die in the 100% concentration in each test. An audit sample collected in December was tested in the Ministry laboratory and was found to be not acutely lethal to *Daphnia*.

Samples from combined effluent #600 were all toxic to *Daphnia*. Two samples had LC50s > 100%, and the remaining four samples had LC50s between 35.6 and 65.5%. The Ministry audit sample conducted in December had an LC50 between 60 and 100%.

Three of six samples from combined effluent #900 were nonlethal and the remaining three samples had LC50s > 100%. The Ministry audit sample collected in December was not acutely lethal to *Daphnia*.

Three of six samples from combined effluent #800 were not acutely lethal to *Daphnia* and two samples had LC50s > 100%. The sample collected in November had a 48 h LC50 = 66.3%. The Ministry audit sample collected in December was nonlethal.

OT cooling water

OT cooling water

02890284 sampled: 12/06/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

03890374 sampled: 12/18/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: Lethal; LC50>100

03900035 sampled: 01/15/90 LC50: 33.2 %
95% fid. limits: 23.0 - 47.8 % slope: 2.7
comments:

03900129 sampled: 02/19/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100

Uniroyal Chemical Ltd. (continued)

03900218 sampled: 03/19/90 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 > 100

OT cooling water

combined effluent

rain gauge

combined effluent

03890217 sampled: 10/16/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100%

03890286 sampled: 11/20/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100%

02890281 sampled: 12/06/89 LC50: 60.0 - 100.0 %
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

03890375 sampled: 12/18/89 LC50: 35.6 %
95% fid. limits: 27.0 - 46.9 % slope: 4.7
comments: Lethal

03900036 sampled: 01/15/90 LC50: 65.5 %
95% fid. limits: 50.3 - 85.1 % slope: 5.5
comments:

03900130 sampled: 02/19/90 LC50: 37.4 %
95% fid. limits: 29.1 - 48.2 % slope: 6.0
comments: Lethal

03900217 sampled: 03/19/90 LC50: 58.4 %
95% fid. limits: 46.2 - 73.8 % slope: 5.7
comments: Lethal

combined effluent

combined effluent

03890218 sampled: 10/16/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100%

03890287 sampled: 11/20/89 LC50: 66.3 %
95% fid. limits: 45.0 - 97.4 % slope: 3.2
comments:

Uniroyal Chemical Ltd. (continued)

02890282 sampled: 12/06/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

03890376 sampled: 12/18/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: Lethal; LC50 > 100%

03900037 sampled: 01/15/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments:

03900127 sampled: 02/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900219 sampled: 03/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

combined effluent

03890219 sampled: 10/16/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50 >100%

03890288 sampled: 11/20/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: LC50>100

02890283 sampled: 12/06/89 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: MISA Audit

03890377 sampled: 12/18/89 LC50: >100 %
95% fid. limits: 0.0 - 0.0 %
comments: Lethal; LC50 > 100%

03900038 sampled: 01/15/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900128 sampled: 02/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: Non lethal

03900220 sampled: 03/19/90 non-lethal
95% fid. limits: 0.0 - 0.0 %
comments: non lethal

Uniroyal Chemical Ltd. (continued)

intake water

TOXICITY TEST REPORT

Sample: 02890284

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
 Elmira, ONT
 (680108)
 Region : West Central
 Industry : Organic Chemical
 Control point : OT cooling water, (200)
 Laboratory : MOE
 Sampling Method : grab
 Sampled By : Smithson&Perkon
 Date Collected : 12/06/89
 Received : 12/07/89
 Tested : 12/07/89 at: 1405
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E				TOTAL MORTALITY
%	00:00	01:00	24:00	49:35	%
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
15	0	0	0	0	0
5	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

SLOPE of Mortality Curve :
 LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02890284

TEST E L A P S E D T I M E
 CONC. % 00:00 01:00 24:00 49:35

100	pH	7.9			8.0
	O2 ppm	8.5			7.5
	Cond.	1145			1122
	Temp(C)	20.0	20.0	20.0	20.0
60	pH	8.0			8.1
	O2 ppm	8.7			7.9
	Cond.	822			842
	Temp(C)	20.0	20.0	20.0	20.0
30	pH	8.0			8.0
	O2 ppm	8.9			7.7
	Cond.	573			590
	Temp(C)	20.0	20.0	20.0	20.0
15	pH	8.1			8.0
	O2 ppm	9.0			8.1
	Cond.	444			457
	Temp(C)	20.0	20.0	20.0	20.0
5	pH	8.1			7.9
	O2 ppm	9.0			8.2
	Cond.	347			362
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH	8.1			7.9
	O2 ppm	9.0			8.0
	Cond.	293			313
	Temp(C)	20.0	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 03890374

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
Elmira, ONT
(680108)
Region : West Central
Industry : Organic Chemical
Control point : OT cooling water, (200)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Hallman/MS
Date Collected : 12/18/89
Received : 12/19/89
Tested : 12/20/89 at: 1500
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00	48:00
100	0	1	1	8
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : Lethal; LC50>100

TOXICITY TEST PARAMETERS

Sample Number: 03890374

TEST CONC. %	ELAPSED TIME		
	00:00	24:00	48:00

100	pH	7.8		8.2
	O2 ppm	8.2		7.7
	Cond.	1018		1008
	Temp(C)	19.0	19.5	19.0
50	pH	8.0		8.3
	O2 ppm	8.4		7.8
	Cond.	673		675
	Temp(C)	19.0	19.5	19.0
25	pH	8.1		8.3
	O2 ppm	8.5		7.8
	Cond.	492		496
	Temp(C)	19.0	19.5	19.0
13	pH	8.1		8.3
	O2 ppm	8.5		7.8
	Cond.	403		405
	Temp(C)	19.0	19.5	19.0
6	pH	8.3		8.3
	O2 ppm	8.5		7.9
	Cond.	348		352
	Temp(C)	19.0	19.5	19.0
Control	pH	8.3		8.2
	O2 ppm	8.5		8.4
	Cond.	302		304
	Temp(C)	19.0	19.5	19.0

TOXICITY TEST REPORT

Sample: 03900035

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
Elmira, ONT
(680108)
Region : West Central
Industry : Organic Chemical
Control point : OT cooling water, (200)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Hallman
Date Collected : 01/15/90
Received : 01/16/90
Tested : 01/17/90 at: 1115
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	%
100	0	12	12	12	100
50	0	0	7	9	75
25	0	0	0	2	16
13	0	0	1	1	8
6	0	0	1	1	8
Control	0	0	0	0	0

48 Hour LC50 : 33.2 %

95% fid. limits : 23.0 - 47.8 %

Comments :

TOXICITY TEST PARAMETERS

Sample Number: 03900035

TEST CONC. %	ELAPSED TIME			
	00:00	04:00	24:00	48:00

100	pH	7.8	7.8		
	O2 ppm	9.1	9.1		
	Cond.	2700	2270		
	Temp(C)	20.0	20.0		
50	pH	7.9		8.2	
	O2 ppm	9.0		8.8	
	Cond.	1720		1830	
	Temp(C)	20.0	20.0	19.0	20.0
25	pH	8.1		8.3	
	O2 ppm	8.8		8.8	
	Cond.	6140		6230	
	Temp(C)	20.0	20.0	19.0	20.0
13	pH	8.2		8.3	
	O2 ppm	8.8		8.9	
	Cond.	3500		3500	
	Temp(C)	20.0	20.0	19.0	20.0
6	pH	8.3		8.3	
	O2 ppm	8.8		8.9	
	Cond.	1813		1820	
	Temp(C)	20.0	20.0	19.0	20.0
Control	pH	8.4		8.3	
	O2 ppm	8.8		8.5	
	Cond.	296		301	
	Temp(C)	20.0	20.0	19.0	20.0

TOXICITY TEST REPORT

Sample: 03900129

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
 Elmira, ONT
 (680108)
 Region : West Central
 Industry : Organic Chemical
 Control point : OT cooling water, (200)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. Hallman
 Date Collected : 02/19/90
 Received : 02/20/90
 Tested : 02/21/90 at: 1015
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	1	1	8
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900129

TEST CONC. %	ELAPSED TIME		
	00:00	24:00	48:00

100	pH	8.1	8.1
	O2 ppm	9.0	8.5
	Cond.	1183	1153
	Temp(C)	19.5	20.0
50	pH	8.2	8.4
	O2 ppm	8.8	8.5
	Cond.	766	760
	Temp(C)	19.5	20.0
25	pH	8.4	8.4
	O2 ppm	8.7	8.6
	Cond.	548	547
	Temp(C)	19.5	20.0
13	pH	8.5	8.4
	O2 ppm	8.6	8.6
	Cond.	434	433
	Temp(C)	19.5	20.0
6	pH	8.6	8.4
	O2 ppm	8.6	8.5
	Cond.	366	365
	Temp(C)	19.5	20.0
Control	pH	8.6	8.4
	O2 ppm	8.6	8.5
	Cond.	307	310
	Temp(C)	19.5	20.0

TOXICITY TEST REPORT

Sample: 03900218

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
 Elmira, ONT
 (680108)
 Region : West Central
 Industry : Organic Chemical
 Control point : OT cooling water, (200)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. Hallman
 Date Collected : 03/19/90
 Received : 03/20/90
 Tested : 03/21/90 at: 1215
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E			TOTAL MORTALITY
	%	00:00	24:00	
100	0	1	1	8
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 > 100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900218

TEST CONC. %		E L A P S E D T I M E		
		00:00	24:00	48:00
100	pH	8.0		8.2
	O2 ppm	9.2		8.7
	Cond.	1016		999
	Temp(C)	20.5	20.0	20.5
50	pH	8.1		8.3
	O2 ppm	8.9		8.6
	Cond.	677		669
	Temp(C)	20.5	20.0	20.5
25	pH	8.1		8.3
	O2 ppm	8.9		8.6
	Cond.	496		494
	Temp(C)	20.5	20.0	20.5
13	pH	8.2		8.3
	O2 ppm	8.7		8.5
	Cond.	405		411
	Temp(C)	20.5	20.0	20.5
6	pH	8.2		8.3
	O2 ppm	8.8		8.5
	Cond.	352		359
	Temp(C)	20.5	20.0	20.5
Control	pH	8.3		8.2
	O2 ppm	8.5		8.6
	Cond.	302		305
	Temp(C)	20.5	20.0	20.5

TOXICITY TEST REPORT

Sample: 03890217

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
 Elmira, ONT
 (680108)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (600)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : B. Miller
 Date Collected : 10/16/89
 Received : 10/17/89
 Tested : 10/18/89 at: 1430
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E				TOTAL MORTALITY
	%	00:00	04:00	24:00 48:00	
Control	0	0	1	1	8
6	0	0	0	0	0
13	0	0	0	0	0
25	0	0	0	1	8
50	0	0	0	0	0
100	0	0	3	4	33

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100%

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890217

TEST ELAPSED TIME
 CONC. % 00:00 04:00 24:00 48:00

Control	pH	8.4			8.3
	O2 ppm	8.7			10.1
	Cond.	296			301
	Temp(C)	20.5	20.0	19.5	20.0
6	pH	8.4			8.4
	O2 ppm	8.8			8.6
	Cond.	343			346
	Temp(C)	20.5	20.0	19.5	20.0
13	pH	8.2			8.4
	O2 ppm	8.7			8.8
	Cond.	397			390
	Temp(C)	20.5	20.0	19.5	20.0
25	pH	8.2			8.3
	O2 ppm	8.7			8.9
	Cond.	475			466
	Temp(C)	20.5	20.0	19.5	20.0
50	pH	8.0			8.3
	O2 ppm	8.7			9.0
	Cond.	658			640
	Temp(C)	20.5	20.0	19.5	20.0
100	pH	7.8			8.2
	O2 ppm	9.0			9.3
	Cond.	983			957
	Temp(C)	20.5	20.0	19.5	20.0

TOXICITY TEST REPORT

Sample: 03890286

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
 Elmira, ONT
 (680108)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (600)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : B. Miller
 Date Collected : 11/20/89
 Received : 11/21/89
 Tested : 11/22/89 at: 1130
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	%
Control	0	0	0	0	0
6	0	0	0	0	0
13	0	0	0	0	0
25	0	0	0	0	0
50	0	0	0	0	0
100	0	0	0	2	16

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100%

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890286

TEST CONC. %	ELAPSED TIME			
	00:00	04:00	24:00	48:00

Control	pH	8.5			8.3
	O2 ppm	9.1			9.3
	Cond.	293			312
	Temp(C)	19.5	19.5	20.0	20.0
6	pH	8.4			8.4
	O2 ppm	9.1			8.5
	Cond.	354			353
	Temp(C)	19.5	19.5	20.0	20.0
13	pH	8.3			8.4
	O2 ppm	9.0			8.8
	Cond.	403			412
	Temp(C)	19.5	19.5	20.0	20.0
25	pH	8.2			8.4
	O2 ppm	9.0			8.9
	Cond.	501			509
	Temp(C)	19.5	19.5	20.0	20.0
50	pH	8.1			8.4
	O2 ppm	9.0			9.0
	Cond.	682			691
	Temp(C)	19.5	19.5	20.0	20.0
100	pH	7.9			8.3
	O2 ppm	9.1			9.1
	Cond.	1020			1035
	Temp(C)	19.5	19.5	20.0	20.0

TOXICITY TEST REPORT

Sample: 02890281

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
 Elmira, ONT
 (680108)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (600)
 Laboratory : MOE
 Sampling Method : grab
 Sampled By : B. Trach
 Date Collected : 12/06/89
 Received : 12/07/89
 Tested : 12/07/89 at: 1346
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E				TOTAL MORTALITY	
	%	00:00	01:39	24:39	49:08	%
100	0	0	10	11		91
60	0	0	0	0		0
30	0	0	0	0		0
15	0	0	0	0		0
5	0	0	0	0		0
Control	0	0	0	0		0

48 Hour LC50 : 60.0 - 100.0 %
 95% fid. limits : 0.0 - 0.0 %
 Comments : MISA Audit

SLOPE of Mortality Curve :
 LC50 Calculated By : unable to calculate

TOXICITY TEST PARAMETERS

Sample Number: 02890281

TEST CONC. %	ELAPSED TIME			
	00:00	01:39	24:39	49:08

100	pH	7.5			8.0
	O2 ppm	8.9			8.1
	Cond.	835			865
	Temp(C)	20.0	20.0	20.0	20.0
60	pH	7.7			8.0
	O2 ppm	9.0			8.4
	Cond.	641			673
	Temp(C)	20.0	20.0	20.0	20.0
30	pH	7.8			7.9
	O2 ppm	9.1			8.2
	Cond.	495			492
	Temp(C)	20.0	20.0	20.0	20.0
15	pH	7.9			7.8
	O2 ppm	9.1			8.2
	Cond.	405			410
	Temp(C)	20.0	20.0	20.0	20.0
5	pH	8.0			7.7
	O2 ppm	9.2			8.2
	Cond.	339			350
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH	8.0			7.3
	O2 ppm	9.0			8.1
	Cond.	281			317
	Temp(C)	20.0	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 03890375

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
Elmira, ONT
(680108)
Region : West Central
Industry : Organic Chemical
Control point : combined effluent, (600)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Hallman/MS
Date Collected : 12/18/89
Received : 12/19/89
Tested : 12/20/89 at: 1510
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E			TOTAL MORTALITY
	%	00:00	24:00 48:00	
100	0	12	12	100
50	0	10	11	91
25	0	1	1	8
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : 35.6 %

95% fid. limits : 27.0 - 46.9 %

Comments : Lethal

TOXICITY TEST PARAMETERS

Sample Number: 03890375

TEST CONC. %	E L A P S E D T I M E		
	00:00	24:00	48:00

100	pH	8.0	8.3
	O2 ppm	9.0	9.5
	Cond.	1025	1035
	Temp(C)	19.0	19.5
50	pH	8.1	8.4
	O2 ppm	8.6	8.2
	Cond.	682	687
	Temp(C)	19.0	19.5 19.0
25	pH	8.2	8.4
	O2 ppm	8.6	8.3
	Cond.	495	501
	Temp(C)	19.0	19.5 19.0
13	pH	8.2	8.3
	O2 ppm	8.7	8.2
	Cond.	401	408
	Temp(C)	19.0	19.5 19.0
6	pH	8.3	8.4
	O2 ppm	8.6	8.1
	Cond.	348	356
	Temp(C)	19.0	19.5 19.0
Control	pH	8.3	8.4
	O2 ppm	8.5	8.4
	Cond.	302	304
	Temp(C)	19.0	19.5 19.0

TOXICITY TEST REPORT

Sample: 03900036

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
Elmira, ONT
(680108)
Region : West Central
Industry : Organic Chemical
Control point : combined effluent, (600)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Hallman
Date Collected : 01/15/90
Received : 01/16/90
Tested : 01/17/90 at: 1140
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	11	11	91
50	0	0	1	8
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : 65.5 %

95% fid. limits : 50.3 - 85.1 %

Comments :

TOXICITY TEST PARAMETERS

Sample Number: 03900036

TEST CONC. %	ELAPSED TIME		
	00:00	24:00	48:00

100	pH	7.9	8.2
	O2 ppm	9.2	8.7
	Cond.	1023	1007
	Temp(C)	20.0	19.0 20.0
50	pH	8.1	8.3
	O2 ppm	8.9	8.7
	Cond.	687	679
	Temp(C)	20.0	19.0 20.0
25	pH	8.2	8.4
	O2 ppm	8.7	8.7
	Cond.	505	498
	Temp(C)	20.0	19.0 20.0
13	pH	8.3	8.4
	O2 ppm	8.7	8.7
	Cond.	408	406
	Temp(C)	20.0	19.0 20.0
6	pH	8.3	8.4
	O2 ppm	8.8	8.6
	Cond.	356	352
	Temp(C)	20.0	19.0 20.0
Control	pH	8.4	8.3
	O2 ppm	8.8	8.3
	Cond.	296	293
	Temp(C)	20.0	19.0 20.0

TOXICITY TEST REPORT

Sample: 03900130

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
Elmira, ONT
(680108)
Region : West Central
Industry : Organic Chemical
Control point : combined effluent, (600)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Hallman
Date Collected : 02/19/90
Received : 02/20/90
Tested : 02/21/90 at: 1040
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	6	12	100
50	0	5	9	75
25	0	0	2	16
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : 37.4 %

95% fid. limits : 29.1 - 48.2 %

Comments : Lethal

TOXICITY TEST PARAMETERS

Sample Number: 03900130

TEST CONC. %	E L A P S E D T I M E		
	00:00	24:00	48:00

100	pH	8.1	8.3
	O2 ppm	8.6	8.3
	Cond.	760	760
	Temp(C)	19.5	20.0 20.0
50	pH	8.3	8.3
	O2 ppm	8.5	8.4
	Cond.	543	542
	Temp(C)	19.5	20.0 20.0
25	pH	8.4	8.4
	O2 ppm	8.5	8.5
	Cond.	427	426
	Temp(C)	19.5	20.0 20.0
13	pH	8.5	8.4
	O2 ppm	8.5	8.6
	Cond.	374	374
	Temp(C)	19.5	20.0 20.0
6	pH	8.5	8.4
	O2 ppm	8.6	8.6
	Cond.	341	338
	Temp(C)	19.5	20.0 20.0
Control	pH	8.6	8.4
	O2 ppm	8.6	8.6
	Cond.	307	309
	Temp(C)	19.5	20.0 20.0

TOXICITY TEST REPORT

Sample: 03900217

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
Elmira, ONT
(680108)
Region : West Central
Industry : Organic Chemical
Control point : combined effluent, (600)
Laboratory : BAR
Sampling Method : Grab
Sampled By : D. Hallman
Date Collected : 03/19/90
Received : 03/20/90
Tested : 03/21/90 at: 1210
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	11	12	100
50	0	2	3	25
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : 58.4 %

95% fid. limits : 46.2 - 73.8 %

Comments : Lethal

TOXICITY TEST PARAMETERS

Sample Number: 03900217

TEST CONC. %	ELAPSED TIME		
	00:00	24:00	48:00

100	pH	7.9	8.0
	O2 ppm	9.1	8.5
	Cond.	971	938
	Temp(C)	20.5	20.0 20.5
50	pH	8.0	8.3
	O2 ppm	8.9	8.5
	Cond.	654	647
	Temp(C)	20.5	20.0 20.5
25	pH	8.1	8.3
	O2 ppm	8.8	8.4
	Cond.	487	483
	Temp(C)	20.5	20.0 20.5
13	pH	8.2	8.3
	O2 ppm	8.8	8.5
	Cond.	400	398
	Temp(C)	20.5	20.0 20.5
6	pH	8.2	8.3
	O2 ppm	8.7	8.4
	Cond.	355	351
	Temp(C)	20.5	20.0 20.5
Control	pH	8.3	8.2
	O2 ppm	8.5	8.6
	Cond.	302	306
	Temp(C)	20.5	20.0 20.5

TOXICITY TEST REPORT

Sample: 03890218

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
 Elmira, ONT
 (680108)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (800)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : B. Miller
 Date Collected : 10/16/89
 Received : 10/17/89
 Tested : 10/18/89 at: 1445

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E				TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	%
Control	0	0	1	1	8
6	0	0	0	0	0
13	0	0	0	0	0
25	0	0	0	0	0
50	0	0	2	2	16
100	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100%

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890218

TEST CONC.	E L A P S E D T I M E			
%	00:00	04:00	24:00	48:00

Control	pH	8.4			8.3
	O2 ppm	8.7			10.2
	Cond.	296			302
	Temp(C)	20.5	20.0	19.5	20.0
6	pH	8.3			8.4
	O2 ppm	8.6			9.0
	Cond.	355			355
	Temp(C)	20.5	20.0	19.5	20.0
13	pH	8.3			8.4
	O2 ppm	8.5			9.1
	Cond.	415			404
	Temp(C)	20.5	20.0	19.5	20.0
25	pH	8.2			8.3
	O2 ppm	8.5			9.1
	Cond.	513			499
	Temp(C)	20.5	20.0	19.5	20.0
50	pH	8.0			8.3
	O2 ppm	8.6			9.0
	Cond.	719			700
	Temp(C)	20.5	20.0	19.5	20.0
100	pH	7.9			8.2
	O2 ppm	8.7			8.9
	Cond.	1116			1077
	Temp(C)	20.5	20.0	19.5	20.0

TOXICITY TEST REPORT

Sample: 03890287

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
Elmira, ONT
(680108)
Region : West Central
Industry : Organic Chemical
Control point : combined effluent, (800)
Laboratory : BAR
Sampling Method : Grab
Sampled By : B. Miller
Date Collected : 11/20/89
Received : 11/21/89
Tested : 11/22/89 at: 1130
Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)
Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME						TOTAL MORTALITY
%	00:00	01:00	02:00	04:00	24:00	48:00	%
Control	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0
25	0	0	0	0	0	1	8
50	0	0	0	0	0	0	0
100	0	0	1	1	6	10	83

48 Hour LC50 : 66.3 %

95% fid. limits : 45.0 - 97.4 %

Comments :

TOXICITY TEST PARAMETERS

Sample Number: 03890287

TEST CONC. %	ELAPSED TIME					
	00:00	01:00	02:00	04:00	24:00	48:00

Control	pH	8.5				8.4
	O2 ppm	9.1				9.2
	Cond.	293				304
	Temp(C)	19.5	19.5	19.5	19.5	20.0
6	pH	8.5				8.4
	O2 ppm	8.9				9.0
	Cond.	369				375
	Temp(C)	19.5	19.5	19.5	19.5	20.0
13	pH	8.4				8.4
	O2 ppm	8.9				9.0
	Cond.	452				456
	Temp(C)	19.5	19.5	19.5	19.5	20.0
25	pH	8.3				8.4
	O2 ppm	9.0				8.9
	Cond.	592				595
	Temp(C)	19.5	19.5	19.5	19.5	20.0
50	pH	8.2				8.4
	O2 ppm	9.3				8.8
	Cond.	879				873
	Temp(C)	19.5	19.5	19.5	19.5	20.0
100	pH	8.1				8.4
	O2 ppm	9.8				8.7
	Cond.	1415				1381
	Temp(C)	19.5	19.5	19.5	19.5	20.0

TOXICITY TEST REPORT

Sample: 02890282

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
Elmira, ONT
(680108)
Region : West Central
Industry : Organic Chemical
Control point : combined effluent, (800)
Laboratory : MOE
Sampling Method : grab
Sampled By : Perkon&Smithson
Date Collected : 12/06/89
Received : 12/07/89
Tested : 12/07/89 at: 1357

Type of Bioassay : STATIC
(Daphnia magna Acute Lethality Toxicity
Test Protocol. OME, 1988)

Test Animal : D. magna
Weight(gm) :
Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	00:43	24:00	49:28	%
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
15	0	0	0	0	0
5	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : MISA Audit

TOXICITY TEST PARAMETERS

Sample Number: 02890282

TEST CONC. %	ELAPSED TIME			
	00:00	00:43	24:00	49:28

100	pH	7.8			8.1
	O2 ppm	8.2			8.0
	Cond.	1197			1216
	Temp(C)	20.0	20.0	20.0	20.0
60	pH	7.9			8.0
	O2 ppm	8.6			7.9
	Cond.	831			867
	Temp(C)	20.0	20.0	20.0	20.0
30	pH	8.0			7.9
	O2 ppm	8.9			8.0
	Cond.	584			601
	Temp(C)	20.0	20.0	20.0	20.0
15	pH	8.0			7.9
	O2 ppm	9.0			8.3
	Cond.	442			454
	Temp(C)	20.0	20.0	20.0	20.0
5	pH	8.1			7.8
	O2 ppm	9.1			8.1
	Cond.	357			365
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH	8.1			7.9
	O2 ppm	9.1			8.3
	Cond.	294			318
	Temp(C)	20.0	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 03890376

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
 Elmira, ONT
 (680108)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (800)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. Hallman/MS
 Date Collected : 12/18/89
 Received : 12/19/89
 Tested : 12/20/89 at: 1520
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00 48:00	
100	0	1	1	8
50	0	0	0	0
25	0	0	1	8
13	0	0	0	0
6	0	0	1	8
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : Lethal; LC50 > 100%

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890376

TEST CONC. %	ELAPSED TIME		
	00:00	24:00	48:00

100	pH	8.0	8.4
	O2 ppm	8.8	8.4
	Cond.	1236	1241
	Temp(C)	19.0	19.5 19.0
50	pH	8.1	8.4
	O2 ppm	8.6	8.4
	Cond.	783	785
	Temp(C)	19.0	19.5 19.0
25	pH	8.2	8.4
	O2 ppm	8.6	8.5
	Cond.	547	552
	Temp(C)	19.0	19.5 19.0
13	pH	8.1	8.4
	O2 ppm	8.5	8.6
	Cond.	432	434
	Temp(C)	19.0	19.5 19.0
6	pH	8.3	8.4
	O2 ppm	8.5	8.8
	Cond.	359	366
	Temp(C)	19.0	19.5 19.0
Control	pH	8.3	8.4
	O2 ppm	8.5	8.8
	Cond.	302	306
	Temp(C)	19.0	19.5 19.0

TOXICITY TEST REPORT

Sample: 03900037

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
 Elmira, ONT
 (680108)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (800)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. Hallman
 Date Collected : 01/15/90
 Received : 01/16/90
 Tested : 01/17/90 at: 1400

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00 48:00	
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments :

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900037

TEST CONC.	%	ELAPSED TIME		
		00:00	24:00	48:00

100	pH	7.9		8.2
	O2 ppm	9.2		8.4
	Cond.	1515		1497
	Temp(C)	20.0	19.0	20.0
50	pH	8.1		8.3
	O2 ppm	8.9		8.5
	Cond.	939		911
	Temp(C)	20.0	19.0	20.0
25	pH	8.2		8.3
	O2 ppm	8.8		8.5
	Cond.	628		609
	Temp(C)	20.0	19.0	20.0
13	pH	8.2		8.3
	O2 ppm	8.7		8.5
	Cond.	472		460
	Temp(C)	20.0	19.0	20.0
6	pH	8.3		8.3
	O2 ppm	8.7		8.5
	Cond.	381		374
	Temp(C)	20.0	19.0	20.0
Control	pH	8.4		8.3
	O2 ppm	8.8		8.5
	Cond.	296		293
	Temp(C)	20.0	19.0	20.0

TOXICITY TEST REPORT

Sample: 03900127

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
 Elmira, ONT
 (680108)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (800)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. Hallman
 Date Collected : 02/19/90
 Received : 02/20/90
 Tested : 02/21/90 at: 950
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E			TOTAL MORTALITY %
	%	00:00	24:00	
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal
 95% fid. limits : 0.0 - 0.0 %
 Comments : Non lethal

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900127

TEST CONC. %	E L A P S E D T I M E		
	00:00	24:00	48:00

100	pH	8.0	8.3
	O2 ppm	8.8	8.4
	Cond.	1166	1153
	Temp(C)	19.5	20.0
50	pH	8.2	8.3
	O2 ppm	8.8	8.5
	Cond.	761	754
	Temp(C)	19.5	20.0
25	pH	8.4	8.4
	O2 ppm	8.7	8.6
	Cond.	535	533
	Temp(C)	19.5	20.0
13	pH	8.5	8.4
	O2 ppm	8.6	8.5
	Cond.	427	426
	Temp(C)	19.5	20.0
6	pH	8.6	8.4
	O2 ppm	8.6	8.4
	Cond.	365	365
	Temp(C)	19.5	20.0
Control	pH	8.6	8.4
	O2 ppm	8.6	8.3
	Cond.	307	310
	Temp(C)	19.5	20.0

TOXICITY TEST REPORT

Sample: 03900219

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
 Elmira, ONT
 (680108)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (800)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. Hallman
 Date Collected : 03/19/90
 Received : 03/20/90
 Tested : 03/21/90 at: 1315
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E			TOTAL MORTALITY	
	%	00:00	24:00	48:00	%
100	0	0	0		0
50	0	0	0		0
25	0	0	0		0
13	0	0	0		0
6	0	0	0		0
Control	0	0	0		0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900219

TEST CONC. %	E L A P S E D T I M E		
	00:00	24:00	48:00

100	pH	8.0	8.2
	O2 ppm	9.3	8.6
	Cond.	1321	1316
	Temp(C)	20.5	20.0
50	pH	8.1	8.3
	O2 ppm	9.0	8.6
	Cond.	819	817
	Temp(C)	20.5	20.0
25	pH	8.2	8.3
	O2 ppm	8.8	8.7
	Cond.	566	568
	Temp(C)	20.5	20.0
13	pH	8.2	8.3
	O2 ppm	8.7	8.7
	Cond.	437	443
	Temp(C)	20.5	20.0
6	pH	8.2	8.3
	O2 ppm	8.8	8.7
	Cond.	365	369
	Temp(C)	20.5	20.0
Control	pH	8.3	8.2
	O2 ppm	8.5	8.7
	Cond.	302	304
	Temp(C)	20.5	20.0

TOXICITY TEST REPORT

Sample: 03890219

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
 Elmira, ONT
 (680108)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (900)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : B. Miller
 Date Collected : 10/16/89
 Received : 10/17/89
 Tested : 10/18/89 at: 1515
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E				TOTAL MORTALITY %
	%	00:00	04:00	24:00	48:00
Control	0	0	0	0	0
6	0	0	0	0	0
13	0	0	1	2	16
25	0	0	0	2	16
50	0	0	0	0	0
100	0	0	1	1	8

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50 >100%

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890219

TEST CONC. %	E L A P S E D T I M E			
	00:00	04:00	24:00	48:00

Control	pH	8.4			8.3
	O2 ppm	8.7			10.2
	Cond.	296			300
	Temp(C)	20.5	20.0	19.5	20.0
6	pH	8.4			8.4
	O2 ppm	8.5			9.4
	Cond.	333			347
	Temp(C)	20.5	20.0	19.5	20.0
13	pH	8.4			8.3
	O2 ppm	8.4			9.4
	Cond.	380			381
	Temp(C)	20.5	20.0	19.5	20.0
25	pH	8.5			8.3
	O2 ppm	8.3			9.1
	Cond.	450			450
	Temp(C)	20.5	20.0	19.5	20.0
50	pH	8.5			8.3
	O2 ppm	7.9			8.6
	Cond.	598			602
	Temp(C)	20.5	20.0	19.5	20.0
100	pH	8.5			8.3
	O2 ppm	7.1			7.5
	Cond.	873			887
	Temp(C)	20.5	20.0	19.5	20.0

TOXICITY TEST REPORT

Sample: 03890288

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
 Elmira, ONT
 (680108)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (900)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : B. Miller
 Date Collected : 11/20/89
 Received : 11/21/89
 Tested : 11/22/89 at: 1150
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME				TOTAL MORTALITY
%	00:00	04:00	24:00	48:00	%
Control	0	0	0	0	0
6	0	0	0	0	0
13	0	0	0	0	0
25	0	0	0	0	0
50	0	0	0	1	8
100	0	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : LC50>100

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890288

TEST CONC.	ELAPSED TIME			
%	00:00	04:00	24:00	48:00

Control	pH	8.5			8.4
	O2 ppm	9.1			9.3
	Cond.	293			310
	Temp(C)	19.5	19.5	20.0	
6	pH	8.4			8.4
	O2 ppm	8.8			8.3
	Cond.	362			364
	Temp(C)	19.5	19.5	20.0	20.0
13	pH	8.4			8.4
	O2 ppm	8.9			8.5
	Cond.	423			435
	Temp(C)	19.5	19.5	20.0	20.0
25	pH	8.4			8.4
	O2 ppm	8.8			8.7
	Cond.	545			561
	Temp(C)	19.5	19.5	20.0	20.0
50	pH	8.3			8.4
	O2 ppm	8.5			8.8
	Cond.	790			803
	Temp(C)	19.0	19.5	20.0	20.0
100	pH	8.2			8.2
	O2 ppm	8.0			8.5
	Cond.	1242			1220
	Temp(C)	19.5	19.5	20.0	20.0

TOXICITY TEST REPORT

Sample: 02890283

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
 Elmira, ONT
 (680108)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (900)
 Laboratory : MOE
 Sampling Method : grab
 Sampled By : Smithson&Perkon
 Date Collected : 12/06/89
 Received : 12/07/89
 Tested : 12/07/89 at: 1532
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E				TOTAL MORTALITY
%	00:00	01:38	24:00	47:38	%
100	0	0	0	0	0
60	0	0	0	0	0
30	0	0	0	0	0
15	0	0	0	0	0
5	0	0	0	0	0
Control	0	0	0	0	0

48 Hour LC50 : Non-lethal
 95% fid. limits : 0.0 - 0.0 %
 Comments : MISA Audit

SLOPE of Mortality Curve :
 LC50 Calculated By : none

TOXICITY TEST PARAMETERS

Sample Number: 02890283

TEST CONC. %	E L A P S E D T I M E			
	00:00	01:38	24:00	47:38

100	pH	8.2			8.2
	O2 ppm	7.3			8.0
	Cond.	756			776
	Temp(C)	20.0	20.0	20.0	20.0
60	pH	8.2			8.1
	O2 ppm	8.3			7.8
	Cond.	578			610
	Temp(C)	20.0	20.0	20.0	20.0
30	pH	8.2			7.9
	O2 ppm	8.6			7.8
	Cond.	446			465
	Temp(C)	20.0	20.0	20.0	20.0
15	pH	8.2			7.8
	O2 ppm	8.9			7.9
	Cond.	375			391
	Temp(C)	20.0	20.0	20.0	20.0
5	pH	8.2			7.8
	O2 ppm	9.1			8.2
	Cond.	330			342
	Temp(C)	20.0	20.0	20.0	20.0
Control	pH	8.1			7.7
	O2 ppm	9.1			8.1
	Cond.	299			311
	Temp(C)	20.0	20.0	20.0	20.0

TOXICITY TEST REPORT

Sample: 03890377

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
 Elmira, ONT
 (680108)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (900)
 Laboratory : BAR
 Sampling Method : GRab
 Sampled By : D. Hallman/MS
 Date Collected : 12/18/89
 Received : 12/19/89
 Tested : 12/20/89 at: 1525
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	1	1	8
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : >100%

95% fid. limits : 0.0 - 0.0 %

Comments : Lethal; LC50 > 100%

SLOPE of Mortality Curve :
LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03890377

TEST CONC. %	ELAPSED TIME		
	00:00	24:00	48:00
100	pH 8.4	8.3	
	O2 ppm 8.3	8.4	
	Cond. 570	578	
	Temp(C) 19.0	19.5	19.5
50	pH 8.4	8.3	
	O2 ppm 8.3	8.5	
	Cond. 438	442	
	Temp(C) 19.0	19.5	19.5
25	pH 8.4	8.3	
	O2 ppm 8.5	8.6	
	Cond. 371	374	
	Temp(C) 19.0	19.5	19.5
13	pH 8.3	8.3	
	O2 ppm 8.5	8.6	
	Cond. 338	340	
	Temp(C) 19.0	19.5	19.5
6	pH 8.3	8.3	
	O2 ppm 8.5	8.6	
	Cond. 318	320	
	Temp(C) 19.0	19.5	19.5
Control	pH 8.3	8.3	
	O2 ppm 8.5	8.7	
	Cond. 302	308	
	Temp(C) 19.0	19.5	19.5

TOXICITY TEST REPORT

Sample: 03900038

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
 Elmira, ONT
 (680108)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (900)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. Hallman
 Date Collected : 01/15/90
 Received : 01/16/90
 Tested : 01/17/90 at: 1410
 Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)
 Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	E L A P S E D T I M E			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900038

TEST CONC. %	E L A P S E D T I M E		
	00:00	24:00	48:00

100	pH	8.5	8.0
	O2 ppm	8.6	8.2
	Cond.	387	394
	Temp(C)	20.0	19.0 20.0
50	pH	8.4	8.2
	O2 ppm	8.7	8.5
	Cond.	347	346
	Temp(C)	20.0	19.0 20.0
25	pH	8.4	8.3
	O2 ppm	8.6	8.6
	Cond.	326	322
	Temp(C)	20.0	19.0 20.0
13	pH	8.3	8.3
	O2 ppm	8.7	8.6
	Cond.	316	311
	Temp(C)	20.0	19.0 20.0
6	pH	8.4	8.3
	O2 ppm	8.7	8.6
	Cond.	310	304
	Temp(C)	20.0	19.0 20.0
Control	pH	8.4	8.3
	O2 ppm	8.8	8.6
	Cond.	296	292
	Temp(C)	20.0	19.0 20.0

TOXICITY TEST REPORT

Sample: 03900128

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
 Elmira, ONT
 (680108)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (900)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. Hallman
 Date Collected : 02/19/90
 Received : 02/20/90
 Tested : 02/21/90 at: 1000

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
	%	00:00	24:00	
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : Non lethal

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900128

TEST CONC. %	ELAPSED TIME		
	00:00	24:00	48:00

100	pH	8.3	8.3
	O2 ppm	9.1	8.3
	Cond.	2270	2260
	Temp(C)	19.5	20.0
50	pH	8.4	8.3
	O2 ppm	9.0	8.4
	Cond.	1332	1325
	Temp(C)	19.5	20.0
25	pH	8.5	8.3
	O2 ppm	8.7	8.5
	Cond.	815	814
	Temp(C)	19.5	20.0
13	pH	9.6	8.4
	O2 ppm	8.6	8.6
	Cond.	583	579
	Temp(C)	19.5	20.0
6	pH	8.6	8.4
	O2 ppm	8.5	8.6
	Cond.	439	435
	Temp(C)	19.5	20.0
Control	pH	8.6	8.4
	O2 ppm	8.6	8.4
	Cond.	307	310
	Temp(C)	19.5	20.0

TOXICITY TEST REPORT

Sample: 03900220

TEST CONDITIONS

Company : Uniroyal Chemical Ltd.
 Elmira, ONT
 (680108)
 Region : West Central
 Industry : Organic Chemical
 Control point : combined effluent, (900)
 Laboratory : BAR
 Sampling Method : Grab
 Sampled By : D. Hallman
 Date Collected : 03/19/90
 Received : 03/20/90
 Tested : 03/21/90 at: 1325

Type of Bioassay : STATIC
 (Daphnia magna Acute Lethality Toxicity
 Test Protocol. OME, 1988)

Test Animal : D. magna
 Weight(gm) :
 Length(mm) :

MORTALITY DATA

TEST CONC.	ELAPSED TIME			TOTAL MORTALITY
%	00:00	24:00	48:00	%
100	0	0	0	0
50	0	0	0	0
25	0	0	0	0
13	0	0	0	0
6	0	0	0	0
Control	0	0	0	0

48 Hour LC50 : Non-lethal

95% fid. limits : 0.0 - 0.0 %

Comments : non lethal

SLOPE of Mortality Curve :
 LC50 Calculated By :

TOXICITY TEST PARAMETERS

Sample Number: 03900220

TEST CONC.	ELAPSED TIME		
%	00:00	24:00	48:00

100	pH	8.1	8.2
	O2 ppm	9.2	8.7
	Cond.	1735	1721
	Temp(C)	20.5	20.0
50	pH	8.2	8.3
	O2 ppm	8.9	8.7
	Cond.	1036	1034
	Temp(C)	20.5	20.0
25	pH	8.2	8.3
	O2 ppm	8.9	8.7
	Cond.	680	681
	Temp(C)	20.5	20.0
13	pH	8.2	8.3
	O2 ppm	8.8	8.7
	Cond.	494	503
	Temp(C)	20.5	20.0
6	pH	8.2	8.3
	O2 ppm	8.8	8.7
	Cond.	392	406
	Temp(C)	20.5	20.0
Control	pH	8.3	8.3
	O2 ppm	8.5	8.6
	Cond.	302	304
	Temp(C)	20.5	20.0



(6933)

TD/195/C45/A38/MOE/MISA